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Proximate Composition and Fatty Acid and Cholesterol Content of 22 Species of Northwest Atlantic Finfish

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ABSTRACT

The moisture, fat, ash, fatty acid profile, and cholesterol content are reported for cooked and raw fillets from 22 species of finfish found in the Northwest Atlantic. All but nine species had 1% or less fat. Ocean perch and a spring sampling of mackerel and wolffish had about 2% fat, followed by yellowfin tuna, whiting, silver hake, butterfish, and a summer sampling of mackerel and wolffish with a range of 3-7% fat. Herring had a range of 5-12% fat representing a winter sampling on the low end and summer sampling on the high end of the range. Bluefin tuna (a summer sampling) contained the most fat with a high of 23% fat. Omega-3 fatty acids were present in excess of omega-6 fatty acids. The fattier fish supplied the most omega-3 fatty acids per gram of tissue. The mean cholesterol content for all species was 57 ± 16 mg/100 g raw tissue. Finfish from the Nortwest Atlantic would appear to fit into the regime for a healthy heart, being low in fat and cholesterol and rich in omega-3 fatty acids.

Introduction

The seafood industry has benefited from the increased emphasis on the role of human diet in the prevention and amelioration of certain diseases and the recent recommendation to substitute fish for meat twice weekly in the American diet (Proceedings of a Conference on Health Effects of Polyunsaturated Fatty Acids in Seafoods, June 1985, Wash., D.C.), and with good justification. Firstly, finfish are low in cholesterol. Two reports, "Cholesterol Treatment Recommendations for Adults" and "Expert Panel Report on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults" (available from National Cholesterol Education Program, National Heart, Lung and Blood Institute, C-200, Bethesda, MD 20892) state that modification in dietary cholesterol intake can, in many individuals, reduce blood cholesterol levels. Secondly, finfish "fat" is about 40% polyunsaturated, a factor which is also beneficial in the lowering of serum cholesterol levels. Thirdly, seafood is one of the richest sources of a group of polyunsaturated fatty acids called omega-3 (ω3) fatty acids. The principle omega-3 fatty acids found in seafood are eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Credit has been tentatively given to this group of omega-3 fatty acids for the low incidence of cardiovascular disease among populations of people that consume large amounts of seafood (Dyerberg 1982, Hirai et al. 1980, Kobayashi et al. 1981). Simopoulos et al. (1986), Lands, (1986), Kinsella (1987), and Nettleton (1985, 1987) have authored very readable books on the topic of seafood and its role in human health.

Concomitant with the heightened publicity concerning the health benefits derived from consumption of seafood is the responsibility of the health care community to provide dietary guidance for those people requiring special dietary needs. It is sometimes a difficult task to find sufficient dietary information about seafood, although the amount of reference information is becoming more extensive (Sidwell 1981, Exler 1987, Krzynowek and Murphy 1987, Gooch et al. 1987). Some of the species contained in this report have been cited in these references. Monkfish (*Lophius americanus*) was the only species duplicated both by the Gloucester and Charleston laboratories (Gooch et al. 1987) of the National Marine Fisheries Service. The species *L. americanus* has not been mentioned in the reference literature. Of the remaining 21 species, four have had no previous data given in the literature. They are white hake, thorny and winter skates, and grey sole. There are proximate composition data for American plaice (Sidwell 1981). There are also proximate composition data for blackback flounder, and fatty acid and proximate composition data for yellowtail flounder, and proximates and cholesterol for cusk (Krzynowek and Murphy 1987), but the last three species lack some of the information contained herein. Data on all the parameters are available for ocean pout (Exler 1987); however, EPA and DHA are conspicuous by their absence in the list of fatty acids.

This report, as does one by Gooch et al. (1987), stems from a national program, the Edibility Profile Study, which was primarily designed to define edibility (flavor and texture) characteristics of the finfish found within the regional waters of three of the National Marine Fisheries Service laboratories: Gloucester, MA; Charleston, SC; and Seattle, WA. Twenty-two species of finfish found in the Northwest Atlantic were included in the Edibility Profile Study for the Gloucester Laboratory. Five species were sampled only once during the year. Seventeen species were sampled twice or more, providing a broader seasonal representation. All samples collected for the Edibility Profile Study were analyzed raw and cooked for moisture, fat, ash, cholesterol, and fatty acids. It is this nutritional data that is contained in this report.

Materials and methods

All fish were landed locally off "day boats" in Gloucester, MA, and were held on ice during transport to the laboratory. Therefore, all samples were provided not more than 24 hours after capture. All samples were identified as to species using taxonomic codes, and scientific names (American Fisheries Society 1980) were assigned. Enough fish to provide 24 taste test portions, approximately 5 × 5 cm, comprised the sampling. Therefore, the number of fish sampled for any one capture date ranged from two to ten. The fish were immediately skinned and filleted, a portion being retained as the raw sample. The fillets were placed in laminated Dazey Seal-A-Meal bags, Model 6007. Three slits, 1 cm in length, were sliced through the bottom of the bags to allow the cooking juices to drain. These bags were placed within Dazey Micro Seal bags, Model 6008, to insure that the fillets did not come in contact with the cooking water and to keep the drip from fouling the cooking water. The bags were placed in mesh metallic baskets and submersed in an agitated water bath maintained at 77°C. Thermocouples were placed in the centers of several fillets, and cooking was complete when the internal temperature registered 71°C. A taste test portion, one from each fish, of both the raw and cooked fillets was frozen at −20°C to await chemical analyses. Thawed portions were composited and homogenized in a Robot Coupe commercial food processor.

Moisture content was determined by drying approximately 10 g of sample to constant weight at 100°C. Total ash was determined by heating the dried moisture samples to constant weight at 525°C (AOAC 1980). Lipids were extracted by the method of Bligh and Dyer (1959). A portion of the chloroform (fat) layer was evaporated to dryness under nitrogen, and the residue was weighed to determine fat content. All the above determinations were made in duplicate. A rough estimate of protein content can be calculated by assuming percent carbohydrates to be negligible and subtracting the percentages of fat, moisture, and ash from 100%.

Cholesterol was determined in triplicate by direct saponification as described in Method C by Kovac et al. (1979). Sterols were analyzed on a Hewlett Packard 5880A gas chromatograph equipped with a flame ionization detector. Sterols were separated on a glass column, 1.8 m × 2 mm (i.d.) packed with Gas Chrom Q, 80-100 mesh, coated with 3% SE-30. The column, injector, and detector temperatures were 245°C, 270°C, and 300°C, respectively. The carrier gas was helium flowing at 30 mL/min. Cholesterol was identified by comparison with retention times of an authenticated standard. Quantitative analyses were done by adding 5-α cholestane to each sample as an internal standard. The samples were run against a standard cholesterol curve, plotting the amount of cholesterol against peak area. Sample variation for cholesterol and lipid content in the raw product was tested for significance at $p \leq 0.01$ using analysis of variance, and points of difference were detected by Duncan's (1955) multiple range test.

A second portion of the chloroform (fat-containing) layer from the Bligh and Dyer (1959) fat extraction procedure was evaporated to dryness under nitrogen, and the lipids were transesterified to their methyl esters by the method of Metcalfe and Schmitz (1961) and later modified by Metcalfe et al. (1966) using boron trifluoride in methanol. Separation of the fatty acid methyl esters (FAME) was done by capillary column gas chromatography. The wall coated open-tubular fused silica column measured 50 m × 0.22 mm (i.d.) and was coated with Carbowax 20M liquid phase. The Hewlett-Packard 5880A gas chromatograph was equipped with a flame ionization detector. Detector and injection port temperatures were 300°C and 270°C, respectively. The oven temperature was held constant at 195°C for 35 minutes and then was ramped to 210°C at 1°/min. The carrier and make-up gases were helium, operated at 2 cc/min and 30 cc/min, respectively. The split ratio was 1:100. Identification of the esters was made by comparison of retention times to those of available authentic standards.

Results and discussion

Where possible, the format of the data presentation will follow that of its sister document from the Charleston Laboratory (Gooch et al. 1987) to facilitate species comparisons. The species are listed alphabetically by their common name, and both common and scientific names are included in Table 1. If there is more than one common name for any given species, the other names are included so that people may relate to those names most familar to them. Data on cooked samples are provided for ease of menu planning, but the discussion section deals exclusively with the raw fish. Differences between the raw and cooked data can be accounted for by moisture loss.

Table 2 summarizes fat, moisture, ash, and cholesterol data for the 22 species. The "No. of Samples" column indicates the number of times the particular fish species was sampled over the course of one or two years of the Edibility Study. For species sampled once, the range is not applicable (NA).

Cholesterol ranged from 40 (silver hake) to 98 (ocean pout) mg/100 g raw tissue, with a mean of 57 ± 16 mg/100 g at one standard deviation. The mean value of the standard deviations for all the samples was 2.6, guaranteeing more analytical precision than is called for considering the variability among fish (Dudek et al. 1981) and with seasonality. It has been our experience with the analyses of many species of finfish over many years that ±20% of the mean for all the cholesterol values reported in the literature would give quite reliable dietary amounts for any given species. A quick check through the 22 species, even with the small seasonal sampling, shows that this observation holds true. For instance, ocean pout has a range of 63-98 mg/100 g with a mean of 80. Adding or subtracting 20% gives the range reported. This rule is invalid for mackerel which has a mean of 72 and a range of 49-95, but with the cholesterol values being so disparate throughout the literature, this observation and simple calculation (only for finfish) might prove helpful for dietary considerations.

A total of 50 samples were analyzed representing 22 species and their seasonal sampling. Table 3 arranges the 50 samples, raw data only, from lowest to highest in fat content, with the lower case letters denoting significant differences. It was felt that this table would enable rapid perusal for dietary decisions. Those samples with the same lower case letters are not significantly different from each other at $p \leqslant 0.01$. The standard deviation for each sample was omitted from the table to reduce confusion. The mean of the standard deviations of all the 50 samples was 0.17, and the standard error of this mean was 0.075.

All but nine species had 1% or less of fat, and all the samples less than 2% fat were not significantly different from each other in fat content. Lean fish, such as the 13 species at less than 2% fat, store fat in their livers and maintain fairly constant fat levels in the muscle tissue as basic cellular lipids. These lipids are primarily polar lipids (Ackman 1980). These species will not show marked seasonal variation in their fat content. For example, cod (0.6% fat) and haddock (0.5% fat) were sampled three times throughout the year—winter, spring, and fall—with no significant difference in their fat content.

The fattier fish, such as herring and mackerel, store excess fat in their muscle, mostly as triglycerides. Changes in food habits, as happens seasonally, are reflected in changes in their fat content. Herring had a fat content of 5% when caught in January when food is scarce, and 12% in July when food is plentiful. Mackerel were sampled in June (1.8% fat) and July (7.1% fat) and never reached the mean of 13.9% reported by Exler (1987). In an earlier paper, Exler et al. (1975) noted that the lowest fat content for mackerel (3.2%) occurred in early summer, and a high fat content (18.8%) was observed in late fall. Ackman and Eaton (1971) reported a spring low of about 2% fat for mackerel light meat and an October sample of about 10% fat. Unfortunately, there is only one sampling (August) of the finfish with the highest fat content (23%), bluefin tuna. Sidwell (1981) cites ranges of 0.5-25.0% fat for bluefin tuna.

The appendix pages following Table 3 contain the nutritional information and are arranged alphabetically by common name for the fish. For those species with multiple sampling dates, the earliest date of capture is listed first. The data for each raw sample are aligned down the left-hand side of the page, with the data from its cooked counterpart aligned down the right. Fat, moisture, ash, and cholesterol contents are listed at the top of the tables. Fatty acid data make up the bulk of the appendix.

The fatty acid shorthand used in the appendix tables denotes number of carbon atoms: number of double bonds, and ω (omega) indicates placement of the first double bond from the methyl end of the fatty acid molecule. Eicosapentaenoic acid (EPA) is 20 carbons long with 5 double bonds, the first double bond occurring at the third carbon from the methyl end, thus giving it the shorthand notation of 20:5ω3. Docosahexaenoic acid (DHA) is 22:6ω3.

Fatty acids are reported both as percent of total fatty acid methyl esters (FAME) and as g/100 g of sample. The latter were calculated by the lipid conversion factor method described by Exler et al. (1975) and later revised and expanded by Weihrauch et al. (1977), substituting in the equation the actual amounts of sterols as analyzed in this laboratory for the default value of 0.05 g/100 g tissue. Phospholipids were assumed to be present at 0.6 g/100 g tissue.

The distinction made earlier (in the discussion of fat content) between polar lipids (lean fish) and triglycerides (fatty fish) becomes more important when we compare the two reporting methods for fatty acid content. Polar lipids are available at about 0.6 g/100 g of muscle in all finfish; in lean fish, this accounts for almost all the total lipids. The polar lipids contain proportionately greater amounts of EPA and DHA than do the triglycerides. Therefore, when we read down the column under "% FAME" for cod, for example, we see that EPA and DHA account for about 50% of all the fatty acids. The EPA and DHA in herring (12% fat) account for only 17% of total fatty acids. At first glance, it would appear that cod would provide more of the beneficial omega-3's than herring. However, per serving size of 100 g (about 3½ ounces), herring provides 2 g of EPA and DHA, as compared with 0.2 g available in cod muscle. The fatty acids available per 100 g of fish muscle is of greater value for health care professionals, since it can be related directly to serving size.

Stansby (1973) noted that bluefin tuna canned in brine contained six times more polyunsatured fats than yellowfin tuna similarly canned, giving respective values of 1.2% polyunsaturates in the flesh versus 0.19%. Our data for the two species, cooked, also shows more polyunsaturated fats in bluefin tuna, at 4.1%, than in yellowfin, at 1.9%. The lower values reported by Stansby may be due to loss of oil in the discarded brine solution and/or to seasonal differences in fat content between his sample and ours. Also, recalling the discussion about the two reporting methods, bluefin tuna, as the fattier fish, would provide more polyunsaturates.

Bluefin, however, with its additional amount of polyunsaturates, accounts for less than 1% of the tuna canned as "light" tuna for the U.S. market (Pers. comm., Natl. Mar. Fish. Serv., Southwest Region, Statistics and Market News, Terminal Is., CA 90731). Yellowfin and skipjack tuna (0.27% polyunsaturates, Stansby 1973) make up the bulk of the "light" tuna that is canned for U.S. consumption.

Total amounts of omega-3 and omega-6 fatty acids have been calculated in anticipation of dietary guidelines for the optimal ratio for the ingestion of these two principal classes of fatty acids. The latter (ω6) are primarily available from vegetable sources. It has been suggested (Lands 1986, Kinsella 1987, Kinsella et al. 1987) that the efficiency of ω3 fatty acids in the prevention and amelioration of several diseases is dependent on the balance between ω3 and ω6 polyunsaturated fatty acids. Casual observation of the ratio of ω3:ω6 (Table 3) in raw finfish showed that the ratio was fairly constant when correlated with species, but not with fat content. For example, in wolffish the ratios were 6.3:1 and 7.2:1 for fat contents of 2.1% and 5.3%, respectively. In herring, the ratios were 10.9:1 and 7.2:1 for fat contents of 12.2% and 5.2%, respectively, and the ratios for mackerel were 13.7:1 and 12.7:1 for fat contents of 7.0% and 1.8%, respectively. Pollock offered the highest ratio of ω3:ω6 at about 18:1.

The large amounts of 22:1ω13 + 22:1ω11 (written 22:1ω13 + ω11 in the tables) found in herring (avg. 24%), mackerel (avg. 19%), and, to some extent, in butterfish (7%) may be explained by their feeding preference for copepods. Copepods contain fatty alcohols rich in 22:1ω11 (Ackman 1980). The silver hake contains relatively large quantities of 22:1ω13 + ω11 (avg. 10%). Silver hake feed voraciously on herring, young mackerel, and butterfish, and probably deposit these fatty acids with their depot fats. Their close relative, the cod, has the same eating habits, but, as mentioned previously, does not store excess fat in its muscle. The phospholipids of fish generally do not contain more than trace amounts of these monoenes, and, since cod muscle fat is almost solely phospholipids, cod has only about 1% total of these monoenes. Other close cousins, the red and white hakes, also have only trace amounts of 22:1, but they have a marked preference for small crustacea, which do not provide large amounts of 22:1.

The information contained in this report is intended for use in menu planning by those individuals concerned with their overall health. Most fish are low in fat and have very little cholesterol. The fattier fish are still low in cholesterol and are an excellent source of omega-3 fatty acids. All finfish provide more of the omega-3 fatty acids than the omega-6 fatty acids and can help to bring the diet into a healthier balance of these two fatty acid groups. Work will be expanded to include more species, processing effects, seasonality, and vitamins and minerals.

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Table 1

Twenty-two species of finfish from the Northwest Atlantic. Nomenclature from American Fisheries Society (1980).

American plaice (Dab)	*Hippoglossoides platessoides*
Butterfish	*Peprilus triacanthus*
Cod	*Gadus morhua*
Cusk	*Brosme brosme*
Flounder, Winter (Blackback)	*Pseudopleuronectes americanus*
Flounder, Yellowtail	*Limanda ferruginea*
Haddock	*Melanogrammus aeglefinus*
Hake, Red	*Urophycis chuss*
Hake, Silver (Whiting)	*Merluccius bilinearis*
Hake, White	*Urophycis tenuis*
Herring, Atlantic	*Clupea harengus harengus*
Mackerel, Atlantic	*Scomber scrombrus*
Monkfish (Goosefish)	*Lophius americanus*
Perch, Ocean (Redfish)	*Sebastes fasciatus*
Pollock	*Pollachius virens*
Pout, Ocean	*Macrozoarces americanus*
Skate, Thorny	*Raja radiata*
Skate, Winter	*Raja ocellata*
Sole, Gray (Witch Flounder)	*Glyptocephalus cynoglossus*
Tuna, Bluefin	*Thunnus thynnus*
Tuna, Yellowfin	*Thunnus albacares*
Wolffish, Atlantic	*Anarhichas lupus*

Table 2

Averages and ranges of seasonal sampling for cholesterol, ash, fat, and moisture for 22 species of finfish. NA = not applicable; n.d. = no data.

Species	No. of samples[1]	Cholesterol (mg%)[2]	Ash (%)	Fat (%)	Moisture (%)
American plaice (Dab)					
Raw	3	45	1.3	0.8	81.3
		38-58	1.0-1.9	0.8-1.0	80.8-81.9
Cooked	3	49	1.3	1.0	78.6
		39-66	1.1-1.8	0.9-1.1	77.7-79.2
Butterfish					
Raw	1	69	0.85	3.6	77.2
		NA			
Cooked	1	73	0.60	8.0	72.2
		NA			
Cod, Atlantic					
Raw	3	57	1.5	0.58	80.3
		53-61	1.0-2.4	0.54-0.61	79.2-80.9
Cooked	3	60	1.6	0.7	77.3
		51-73	0.8-2.2	0.7-0.8	76.4-77.6
Cusk					
Raw	2	49	1.2	0.6	78.4
		43-56	1.0-1.5	0.5-0.6	77.6-79.3
Cooked	2	61	1.3	0.8	72.8
		57-64	1.2-1.5	0.7-0.9	71.5-74.2
Flounder, Winter (Blackback)					
Raw	3	62	1.4	0.9	79.4
		56-65	1.3-1.4	0.1-1.7	79.1-79.6
Cooked	3	71	1.5	1.1	75.2
		65-74	1.3-1.6	1.0-1.2	74.7-75.9

Table 2—Continued

Species	No. of samples[1]	Cholesterol (mg%)[2]	Ash (%)	Fat (%)	Moisture (%)
Flounder, Yellowtail					
Raw	3	62	1.2	0.8	80.0
		55-68	1.0-1.4	0.7-1.0	79.7-80.4
Cooked	3	72	1.3	1.3	74.7
		60-78	1.1-1.4	1.1-1.4	73.2-75.5
Haddock					
Raw	3	57	1.1	0.5	80.6
		45-74	0.9-1.1	0.4-0.7	78.5-82.3
Cooked	3	65	1.0	0.9	76.9
		57-77	0.8-1.2	0.7-0.9	72.8-81.4
Hake, Red					
Raw	3	43	1.1	0.5	82.5
		39-47	1.0-1.3	0.5-0.7	82.2-82.9
Cooked	3	54	1.3	0.8	78.2
		45-65	1.1-1.2	0.6-0.8	77.4-79.0
Hake, Silver (Whiting)					
Raw	4	45	1.3	3.8	78.2
		37-45	1.1-1.5	2.6-5.5	76.0-79.5
Cooked	4	48	1.5	4.9	75.2
		41-57	1.2-1.8	3.2-6.8	73.2-77.5
Hake, White					
Raw	1	49	1.2	0.8	82.3
		NA			
Cooked	1	49	1.4	0.9	78.8
		NA			
Herring, Atlantic					
Raw	4	65	1.9	8.7	71.3
		39-93	1.1-2.5	5.2-12.2	67.4-75.2
Cooked	4	72	2.1	9.4	68.0
		43-113	0.9-3.1	3.5-13.4	65.7-74.9
Mackerel, Atlantic					
Raw	2	72	1.3	4.4	71.6
		49-95	1.1-1.5	1.8-7.1	67.3-75.9
Cooked	2	79	1.1	4.6	71.0
		55-102	0.8-1.5	1.9-7.3	67.3-74.7
Monkfish (Goosefish)					
Raw	2	48	1.0	0.4	83.2
		42-53	1.0-1.1	0.3-0.6	84.9-81.6
Cooked	2	78	1.0	0.8	75.3)
		75-81	1.0-1.0	0.8-0.9	73.9-76.8
Ocean Perch (Redfish)					
Raw	2	56	1.3	1.4	78.5
		53-59	1.2-1.5	1.0-1.8	78.4-78.6
Cooked	2	63	1.0	1.5	75.0
		60-65	0.8-1.2	1.0-2.1	74.3-75.8
Ocean Pout					
Raw	2	80	0.9	0.8	80.8
		63-98	0.8-1.1	0.6-1.0	79.6-82.0
Cooked	2	120	0.9	1.3	73.7
		94-147	0.9-1.0	1.1-1.6	73.0-74.3
Pollock					
Raw	2	56	1.4	0.4	76.9
		54-58	1.3-1.5	0.4-0.5	75.5-78.2
Cooked	2	62	1.5	0.9	75.1
		60-63	1.4-1.6	0.8-1.0	74.8-75.5
Skate, Thorny					
Raw	1	55	1.2	0.7	79.5
		NA			
Cooked	1	n.d.	n.d.	n.d.	n.d.

Table 2—Continued

Species	No. of samples[1]	Cholesterol (mg%)[2]	Ash	Fat	Moisture
			(%)		
Skate, Winter					
Raw	2	56	1.0	0.7	78.3
		52-60	0.9-1.1	0.7-0.7	77.7-78.9
Cooked	2	66	1.0	0.9	74.8
		64-68	1.0-1.1	0.8-1.0	74.0-75.6
Sole, Gray (Winter flounder)					
Raw	3	49	1.2	0.7	81.2
		46-53	1.0-1.4	0.7-0.8	79.7-82.5
Cooked	3	61	1.1	0.9	77.2
		57-68	0.9-1.2	0.8-1.0	76.5-78.5
Tuna, Bluefin (tail section)					
Raw	1	53	0.9	23.0	59.5
		NA			
Cooked	1	42	1.5	24.4	52.3
		NA			
Tuna, Yellowfin					
Raw	1	44	2.4	4.1	69.2
		NA			
Cooked	1	37	0.9	6.5	65.0
		NA			
Wolffish, Atlantic					
Raw	2	48	0.9	3.7	77.7
		47-50	0.8-1.0	2.1-5.2	76.1-79.2
Cooked	2	53	1.2	2.2	75.6
		52-54	1.1-1.3	1.4-3.1	74.9-76.3

[1]Number of times sampled over the course of 1-2 years.
[2]Mean value of the standard deviations of all samples was 2.60.

Table 3

Finfish arranged in order of increasing fat content for raw samples and ratio of omega-3 fatty acids to omega-6 fatty acids.

Species	Date of capture	% Fat[1]	[2]Significant difference ($P \leq 0.01$)	Ratio of ω3/ω6 fatty acids	Species	Date of capture	% Fat[1]	[2]Significant difference $P \leq 0.01$)	Ratio of ω3/ω6 fatty acids
Monkfish	11/85	0.3	a	4.4	Flounder, Winter	1/87	0.8	a,b	13.7
Haddock	5/87	0.4	a	8.2	Sole, Gray	11/86	0.7	a,b	9.5
Pollock	9/85	0.4	a	19.1	Sole, Gray	3/87	0.8	a,b	6.8
Hake, Red	10/85	0.4	a	16.2	Hake, White	10/86	0.8	a,b	12.9
Hake, Red	4/86	0.5	a	17.8	Flounder, Yellowtail	5/86	1.0	a,b,c	—
Cod, Atlantic	10/85	0.5	a	14.6	American plaice	4/86	1.0	a,b,c	—
Cusk	1/87	0.5	a	12.0	Ocean Pout	5/87	1.1	a,b,c	6.3
Haddock	3/86	0.6	a	11.5	Ocean Perch	7/85	1.1	a,b,c	—
Monkfish	7/86	0.6	a	8.9	Flounder, Winter	10/86	1.2	a,b,c	11.0
Cod, Atlantic	1/86	0.6	a	11.2	Mackerel	6/87	1.8	a,b,c	12.7
Pollock	1/86	0.6	a	17.3	Ocean Perch	9/86	1.9	a,b,c	10.9
Cod, Atlantic	5/85	0.6	a	16.3	Wolffish	3/86	2.1	a,b,c,d	6.3
Hake, Red	1/87	0.6	a	14.3	Hake, Silver	6/85	2.7	b,c,d,e	9.8
Ocean Pout	1/87	0.6	a	9.7	Hake, Silver	9/86	2.8	c,d,e	11.5
Cusk	11/86	0.6	a	9.0	Butterfish	4/87	3.7	d,e,f	6.8
Skate, Winter	2/87	0.7	a	8.5	Tuna, Yellowtail	6/86	4.4	e,f,g	11.3
Skate, Winter	3/87	0.7	a	8.9	Hake, Silver	12/87	4.4	e,f,g	10.2
Skate, Thorny	2/86	0.7	a	7.7	Herring	1/86	5.2	f,g	7.2
American plaice	12/86	0.7	a	10.8	Wolffish	6/85	5.3	f,g	7.2
Sole, Gray	5/86	0.7	a	6.1	Hake, Silver	4/86	5.6	g,h	9.5
Haddock	9/86	0.7	a	13.2	Herring	11/86	6.9	h	13.5
Flounder, Yellowtail	4/87	0.7	a	13.6	Mackerel	7/86	7.0	h	13.7
American plaice	6/87	0.8	a,b	5.0	Herring	9/86	10.7	i	15.8
Flounder, Yellowtail	10/86	0.8	a,b	15.1	Herring	7/85	12.2	j	10.9
Flounder, Winter	5/86	0.8	a,b	12.0	Tuna, Bluefin	8/85	23.0	k	—

[1]Mean of the standard deviations of all 50 samples was 0.17, and the standard error of this mean was 0.075.

[2]Samples with the same lower case letters are not significantly different from each other in fat content at $p \leq 0.01$.

Appendix

The following charts contain nutritional information on 22 species of finfish arranged in alphabetical order by common name. Information for each sampling date for those species with multiple sampling dates is listed separately with the earliest date of capture listed first. FAME = Fatty acid methyl esters. The fatty acid shorthand notation denotes number of carbon atoms: number of double bonds, and "ω" (omega) indicates placement of the first double bond from the methyl end of the fatty acid molecule. The notation "N.D." designates no data.

American Plaice
Hippoglossoides platessoides

	RAW		COOKED			RAW		COOKED	
Date of capture	**04/09/86**		**04/09/86**		**Date of capture**	**06/24/87**		**06/24/87**	
% Fat	**1.05**		**1.13**		**% Fat**	**0.76**		**1.03**	
% Moisture	**81.94**		**79.23**		**% Moisture**	**81.26**		**78.98**	
% Ash	**1.08**		**1.14**		**% Ash**	**1.90**		**1.83**	
mg% Cholesterol	**39.07**		**39.83**		**mg% Cholesterol**	**38.17**		**42.85**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**	**FAME**	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	N.D.	N.D.	6.6	0.059	14:0	5.0	0.027	6.2	0.049
15:0	N.D.	N.D.	0.8	0.007	15:0	0.6	0.003		0.000
16:0	N.D.	N.D.	15.4	0.139	16:0	12.5	0.068	15.1	0.120
17:0	N.D.	N.D.	0.5	0.004	17:0	0.4	0.002	0.4	0.004
18:0	N.D.	N.D.	4.0	0.036	18:0	3.5	0.019	3.6	0.029
20:0	N.D.	N.D.	0.2	0.002	20:0		0.000		0.000
22:0	N.D.	N.D.		0.000	22:0		0.000		0.000
16:1ω7	N.D.	N.D.	3.1	0.027	16:1ω7	0.8	0.004	2.7	0.021
16:1ω5	N.D.	N.D.	0.3	0.003	16:1ω5	2.5	0.014		0.000
18:1ω9	N.D.	N.D.	8.6	0.077	18:1ω9	8.1	0.044	8.1	0.065
18:1ω7	N.D.	N.D.	2.6	0.024	18:1ω7	1.9	0.010	2.2	0.018
18:1ω5	N.D.	N.D.	0.3	0.003	18:1ω5	0.2	0.001	0.2	0.002
20:1ω11	N.D.	N.D.	4.1	0.037	20:1ω11	3.3	0.018	3.1	0.025
20:1ω9	N.D.	N.D.	3.8	0.035	20:1ω9	3.3	0.018	3.8	0.031
20:1ω7	N.D.	N.D.	0.4	0.004	20:1ω7	0.4	0.002	0.4	0.003
Sum 20:1's	N.D.	N.D.	8.4	0.076	Sum 20:1's	6.9	0.038	7.3	0.058
22:1ω13+11	N.D.	N.D.	5.3	0.048	22:1ω13+11	5.1	0.028	5.3	0.042
22:1ω9	N.D.	N.D.	0.7	0.007	22:1ω9	0.8	0.005	0.9	0.007
22:1ω7	N.D.	N.D.		0.000	22:1ω7		0.000		0.000
Sum 22:1's	N.D.	N.D.	6.1	0.055	Sum 22:1's	5.9	0.032	6.2	0.049
18:2ω6	N.D.	N.D.	0.7	0.007	18:2ω6	0.9	0.005	1.0	0.008
20:2ω6	N.D.	N.D.	0.2	0.002	20:2ω6	1.0	0.005	1.9	0.015
18:3ω3	N.D.	N.D.	0.3	0.003	18:3ω3	0.3	0.002	0.3	0.003
20:3ω3	N.D.	N.D.		0.000	20:3ω3		0.000		0.000
20:3ω6	N.D.	N.D.		0.000	20:3ω6		0.000		0.000
18:4ω3	N.D.	N.D.	0.3	0.003	18:4ω3	0.2	0.001	0.3	0.002
20:4ω6	N.D.	N.D.	4.2	0.038	20:4ω6	4.1	0.023	4.5	0.036
20:5ω3	N.D.	N.D.	16.3	0.147	20:5ω3	14.1	0.077	14.6	0.116
22:5ω3	N.D.	N.D.	1.8	0.016	22:5ω3	1.7	0.009	1.7	0.014
22:6ω3	N.D.	N.D.	10.6	0.095	22:6ω3	13.6	0.075	14.6	0.116
TOTALS:					TOTALS:				
Saturates			27.4	0.247	Saturates	22.0	0.121	25.3	0.202
Monounsaturates			29.4	0.265	Monounsaturates	20.4	0.144	20.8	0.215
Polyunsaturates			34.5	0.311	Polyunsaturates	35.9	0.197	38.8	0.309
Omega-3's			29.3	0.264	Omega-3's	29.9	0.164	31.5	0.251
Omega-6's			5.2	0.047	Omega-6's	6.0	0.033	7.3	0.058

American Plaice (cont.)
Hippoglossoides platessoides

	RAW		COOKED	
Date of capture	**12/18/86**		**12/18/86**	
% Fat	**0.70**		**0.91**	
% Moisture	**80.81**		**77.77**	
% Ash	**1.14**		**1.10**	
mg% Cholesterol	**58.89**		**66.16**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	2.7	0.013	3.4	0.023
15:0	0.5	0.002	0.3	0.002
16:0	16.2	0.076	15.0	0.099
17:0	0.3	0.002	0.3	0.002
18:0	3.5	0.016	3.3	0.022
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	2.6	0.012	2.1	0.014
16:1ω5	0.4	0.002	0.4	0.002
18:1ω9	6.6	0.031	7.1	0.047
18:1ω7	3.0	0.014	2.6	0.017
18:1ω5	0.2	0.001	0.2	0.001
20:1ω11	0.9	0.004	1.3	0.009
20:1ω9	1.3	0.006	1.6	0.011
20:1ω7	0.5	0.002	0.4	0.003
Sum 20:1's	2.7	0.013	3.3	0.022
22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	0.7	0.003	0.8	0.005
20:2ω6	0.2	0.001	0.2	0.001
18:3ω3	0.2	0.001	0.2	0.001
20:3ω3		0.000	0.1	0.001
20:3ω6		0.000		0.000
18:4ω3	0.6	0.003	0.4	0.003
20:4ω6	3.6	0.017	3.6	0.024
20:5ω3	17.0	0.079	17.6	0.116
22:5ω3	3.2	0.015	2.7	0.018
22:6ω3	27.3	0.128	22.8	0.151
TOTALS:				
Saturates	23.2	0.108	22.4	0.148
Monounsaturates	15.6	0.073	15.7	0.104
Polyunsaturates	52.8	0.246	48.3	0.319
Omega-3's	48.4	0.226	43.8	0.289
Omega-6's	4.5	0.021	4.5	0.030

Butterfish
Peprilus triacanthus

	RAW		COOKED	
Date of capture	**04/29/87**		**04/29/87**	
% Fat	**3.68**		**8.03**	
% Moisture	**77.27**		**72.25**	
% Ash	**0.85**		**0.60**	
mg% Cholesterol	**69.56**		**73.85**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	7.0	0.232	7.9	0.586
15:0	0.6	0.019	0.7	0.049
16:0	15.4	0.510	17.4	1.302
17:0	1.5	0.051	1.4	0.106
18:0	4.2	0.140	3.6	0.265
20:0		0.000		0.000
22:0		0.000		0.000
24:0		0.000		0.000
16:1ω7	3.0	0.100	4.2	0.313
16:1ω5		0.000	0.2	0.013
18:1ω9	20.4	0.673	21.2	1.581
18:1ω7	1.5	0.048	1.5	0.114
18:1ω5	0.3	0.010	0.3	0.026
20:1ω11	0.5	0.017	0.4	0.027
20:1ω9	5.3	0.176	4.8	0.355
20:1ω7	1.4	0.045	1.2	0.091
Sum 20:1's	7.2	0.237	6.3	0.472
22:1ω13+11	7.1	0.234	5.2	0.391
22:1ω9	4.4	0.146	3.1	0.233
22:1ω7	0.2	0.008	0.2	0.015
Sum 22:1's	11.7	0.388	8.6	0.640
18:2ω6	1.2	0.039	1.2	0.089
20:2ω6	0.4	0.012	0.3	0.023
18:3ω3	0.8	0.027	1.0	0.075
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3	1.0	0.035	1.6	0.119
20:4ω6	1.0	0.032	1.0	0.076
20:5ω3	3.3	0.111	4.3	0.321
22:5ω3	1.5	0.049	1.7	0.123
22:6ω3	10.3	0.341	9.1	0.677
TOTALS:				
Saturates	28.8	0.952	30.9	2.308
Monounsaturates	44.1	1.457	42.3	3.159
Polyunsaturates	19.5	0.646	20.1	1.503
Omega-3's	17.0	0.563	17.6	1.315
Omega-6's	2.5	0.083	2.5	0.188

Cod, Atlantic
scrod
Gadus morhua

	RAW		COOKED	
Date of capture	**05/03/85**		**05/03/85**	
% Fat	**0.61**		**0.84**	
% Moisture	**80.91**		**77.95**	
% Ash	**1.03**		**0.83**	
mg% Cholesterol	**61.17**		**73.03**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	1.3	0.005	1.4	0.008
15:0	0.3	0.001	0.3	0.002
16:0	17.0	0.067	16.5	0.098
17:0	0.2	0.001	0.2	0.001
18:0	3.1	0.012	2.9	0.017
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	1.3	0.005	1.3	0.008
16:1ω5	0.2	0.001	0.3	0.001
18:1ω9	7.0	0.028	6.9	0.041
18:1ω7	2.6	0.010	2.6	0.015
18:1ω5		0.000	0.3	0.001
20:1ω11		0.000		0.000
20:1ω9	1.3	0.005	1.3	0.007
20:1ω7		0.000		0.000
Sum 20:1's	1.3	0.005	1.3	0.007
22:1ω13+11		0.000	0.5	0.003
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.5	0.003
18:2ω6	0.7	0.003	0.8	0.004
20:2ω6		0.000		0.000
18:3ω3		0.000		0.000
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3	0.7	0.003	0.7	0.004
20:4ω6	2.4	0.010	2.5	0.015
20:5ω3	14.9	0.059	16.2	0.096
22:5ω3	1.7	0.007	1.8	0.011
22:6ω3	34.2	0.135	35.8	0.212
TOTALS:				
Saturates	21.9	0.086	21.3	0.126
Monounsaturates	12.5	0.049	13.0	0.077
Polyunsaturates	54.6	0.216	57.9	0.342
Omega-3's	51.5	0.203	54.6	0.323
Omega-6's	3.2	0.012	3.3	0.019

	RAW		COOKED	
Date of capture	**10/18/85**		**10/18/85**	
% Fat	**0.54**		**0.72**	
% Moisture	**79.21**		**76.43**	
% Ash	**2.39**		**2.23**	
mg% Cholesterol	**53.77**		**56.72**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	0.7	0.003	0.7	0.003
15:0	0.2	0.001	0.2	0.001
16:0	18.1	0.063	17.3	0.085
17:0	0.2	0.001	0.2	0.001
18:0	4.2	0.015	4.3	0.021
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	1.1	0.004	1.0	0.005
16:1ω5	0.3	0.001	0.3	0.001
18:1ω9	6.9	0.024	7.1	0.035
18:1ω7	2.9	0.010	3.0	0.015
18:1ω5		0.000	0.2	0.001
20:1ω11		0.000	0.3	0.001
20:1ω9	1.0	0.003	0.9	0.004
20:1ω7		0.000	0.2	0.001
Sum 20:1's	1.0	0.003	1.4	0.007
22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	0.5	0.002	0.6	0.003
20:2ω6		0.000	0.2	0.001
18:3ω3		0.000	0.2	0.001
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3	0.5	0.002	0.5	0.002
20:4ω6	3.4	0.012	3.4	0.017
20:5ω3	14.9	0.052	15.0	0.074
22:5ω3	2.1	0.007	2.2	0.011
22:6ω3	39.6	0.139	37.7	0.186
TOTALS:				
Saturates	23.5	0.082	22.8	0.112
Monounsaturates	12.2	0.043	13.0	0.064
Polyunsaturates	61.0	0.214	59.7	0.294
Omega-3's	57.1	0.200	55.6	0.274
Omega-6's	3.9	0.014	4.1	0.020

Cod, Atlantic (cont.)
scrod
Gadus morhua

	RAW		COOKED	
Date of capture	**01/23/86**		**01/23/86**	
% Fat	**0.59**		**0.77**	
% Moisture	**80.89**		**77.62**	
% Ash	**1.22**		**1.63**	
mg% Cholesterol	**55.22**		**51.97**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	0.7	0.003	0.7	0.004
15:0	0.3	0.001	0.3	0.002
16:0	18.5	0.071	18.6	0.101
17:0	0.4	0.002	0.4	0.002
18:0	4.8	0.019	4.8	0.026
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	1.6	0.006	1.6	0.009
16:1ω5	0.3	0.001	0.3	0.002
18:1ω9	7.4	0.029	6.9	0.038
18:1ω7	4.3	0.016	4.2	0.023
18:1ω5		0.000	0.3	0.002
20:1ω11		0.000	0.2	0.001
20:1ω9	0.5	0.002	0.5	0.003
20:1ω7		0.000	0.2	0.001
Sum 20:1's	0.5	0.002	0.9	0.005
22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	0.5	0.002	0.5	0.003
20:2ω6		0.000	0.2	0.001
18:3ω3		0.000	0.1	0.001
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3		0.000	0.3	0.001
20:4ω6	4.2	0.016	4.2	0.023
20:5ω3	17.0	0.065	17.1	0.093
22:5ω3	2.1	0.008	1.9	0.011
22:6ω3	33.4	0.129	30.7	0.167
TOTALS:				
Saturates	24.8	0.096	24.8	0.135
Monounsaturates	14.1	0.054	14.2	0.077
Polyunsaturates	57.2	0.220	55.2	0.301
Omega-3's	52.5	0.202	50.2	0.274
Omega-6's	4.7	0.018	5.0	0.027

Cusk

Brosme brosme

	RAW	COOKED
Date of capture	11/12/86	11/12/86
% Fat	0.64	0.865
% Moisture	77.64	71.52
% Ash	1.51	1.55
mg% Cholesterol	43.19	57.71

FAME	% FAME	g/100g	% FAME	g/100g
14:0	0.9	0.004	0.8	0.005
15:0	0.2	0.001	0.2	0.001
16:0	21.2	0.091	19.5	0.124
17:0		0.000	0.2	0.001
18:0	4.7	0.020	4.1	0.026
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	1.6	0.007	1.4	0.009
16:1ω5		0.000	0.3	0.002
18:1ω9	11.0	0.047	9.7	0.062
18:1ω7	3.2	0.014	2.7	0.017
18:1ω5		0.000	0.2	0.002
20:1ω11		0.000		0.000
20:1ω9	1.1	0.005	0.9	0.006
20:1ω7		0.000		0.000
Sum 20:1's	1.1	0.005	0.9	0.006
22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	0.8	0.003	0.8	0.005
20:2ω6		0.000		0.000
18:3ω3		0.000		0.000
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3		0.000		0.000
20:4ω6	4.6	0.020	4.6	0.029
20:5ω3	12.0	0.052	12.0	0.077
22:5ω3	2.4	0.010	2.6	0.016
22:6ω3	33.7	0.145	36.4	0.231
TOTALS:				
Saturates	27.0	0.116	24.7	0.157
Monounsaturates	16.9	0.073	15.3	0.097
Polyunsaturates	53.5	0.230	56.3	0.358
Omega-3's	48.1	0.207	51.0	0.324
Omega-6's	5.3	0.023	5.3	0.034

	RAW	COOKED
Date of capture	01/29/87	01/29/87
% Fat	0.55	0.77
% Moisture	79.35	74.23
% Ash	1.05	1.22
mg% Cholesterol	56.70	64.29

FAME	% FAME	g/100g	% FAME	g/100g
14:0	0.5	0.002	0.5	0.003
15:0	0.2	0.001	0.2	0.001
16:0	16.9	0.060	16.9	0.089
17:0	0.2	0.001	0.2	0.001
18:0	4.2	0.015	3.9	0.020
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	1.0	0.004	0.9	0.005
16:1ω5	0.2	0.001	0.2	0.001
18:1ω9	9.1	0.032	8.6	0.046
18:1ω7	2.9	0.010	2.6	0.014
18:1ω5	0.2	0.001	0.2	0.001
20:1ω11	0.4	0.001	0.3	0.002
20:1ω9	1.0	0.003	0.9	0.004
20:1ω7		0.000		0.000
Sum 20:1's	1.3	0.005	1.2	0.006
22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	0.6	0.002	0.7	0.003
20:2ω6	0.2	0.001	0.2	0.001
18:3ω3	0.2	0.001	0.2	0.001
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3	0.2	0.001	0.2	0.001
20:4ω6	3.6	0.013	3.6	0.019
20:5ω3	9.2	0.032	9.2	0.048
22:5ω3	2.7	0.010	2.6	0.014
22:6ω3	41.3	0.145	42.8	0.226
TOTALS:				
Saturates	22.0	0.077	21.6	0.114
Monounsaturates	14.7	0.052	13.8	0.073
Polyunsaturates	58.0	0.204	59.3	0.313
Omega-3's	53.6	0.188	54.8	0.290
Omega-6's	4.5	0.016	4.4	0.023

Flounder, Yellowtail (cont.)

Limanda ferruginea

	RAW		COOKED	
Date of capture	**10/23/86**		**10/23/86**	
% Fat	**0.78**		**1.13**	
% Moisture	**80.08**		**75.43**	
% Ash	**1.08**		**1.37**	
mg% Cholesterol	**68.65**		**76.92**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	1.8	0.009	1.5	0.013
15:0	0.5	0.003	0.4	0.004
16:0	16.0	0.086	15.3	0.132
17:0	0.5	0.003	0.5	0.004
18:0	5.0	0.027	5.0	0.044
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	4.3	0.023	3.5	0.030
16:1ω5	0.3	0.002	0.4	0.003
18:1ω9	5.4	0.029	5.3	0.045
18:1ω7	4.0	0.022	3.8	0.033
18:1ω5	0.4	0.002	0.4	0.003
20:1ω11	1.3	0.007	0.8	0.007
20:1ω9	0.6	0.003	0.5	0.005
20:1ω7	2.0	0.011	1.8	0.015
Sum 20:1's	3.9	0.021	3.1	0.026
22:1ω13+11	3.8	0.020	3.4	0.029
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	3.8	0.020	3.4	0.029
18:2ω6	0.5	0.003	0.5	0.004
20:2ω6		0.000	0.3	0.002
18:3ω3		0.000		0.000
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3	0.6	0.003	0.4	0.003
20:4ω6	2.5	0.013	2.6	0.023
20:5ω3	21.7	0.117	21.9	0.190
22:5ω3	3.4	0.018	3.4	0.029
22:6ω3	19.6	0.106	21.1	0.182
TOTALS:				
Saturates	23.7	0.128	22.7	0.197
Monounsaturates	22.1	0.119	19.8	0.171
Polyunsaturates	48.3	0.260	50.1	0.433
Omega-3's	45.3	0.244	46.7	0.404
Omega-6's	3.0	0.016	3.4	0.029

	RAW		COOKED	
Date of capture	**04/09/87**		**04/09/87**	
% Fat	**0.74**		**1.30**	
% Moisture	**79.74**		**75.53**	
% Ash	**1.15**		**1.16**	
mg% Cholesterol	**55.95**		**60.16**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	1.9	0.019	1.9	0.039
15:0	0.6	0.006	0.6	0.013
16:0	15.4	0.157	17.4	0.363
17:0		0.000		0.000
18:0	4.3	0.022	5.2	0.055
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	3.0	0.015	3.1	0.032
16:1ω5		0.000		0.000
18:1ω9	6.1	0.031	6.9	0.072
18:1ω7	3.8	0.019	4.0	0.042
18:1ω5	0.5	0.003	0.5	0.005
20:1ω11	1.3	0.007	1.2	0.012
20:1ω9	0.8	0.004	1.0	0.010
20:1ω7	2.4	0.012	2.2	0.023
Sum 20:1's	4.5	0.023	4.4	0.046
22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	0.6	0.003	0.6	0.006
20:2ω6	0.4	0.002	0.4	0.004
18:3ω3	0.3	0.002	0.4	0.004
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3	0.4	0.002	0.4	0.004
20:4ω6	2.5	0.013	2.6	0.028
20:5ω3	20.2	0.103	18.5	0.193
22:5ω3	3.9	0.020	3.6	0.038
22:6ω3	22.1	0.112	20.7	0.216
TOTALS:				
Saturates	22.2	0.204	25.1	0.470
Monounsaturates	18.3	0.093	19.3	0.202
Polyunsaturates	50.5	0.256	47.3	0.493
Omega-3's	47.0	0.239	43.6	0.455
Omega-6's	3.5	0.018	3.6	0.038

Haddock

Melanogrammus aeglefinus

	RAW	COOKED		RAW	COOKED
Date of capture	**03/06/86**	**03/06/86**	**Date of capture**	**09/04/86**	**09/04/86**
% Fat	**0.58**	**0.96**	**% Fat**	**0.73**	**0.97**
% Moisture	**80.96**	**81.44**	**% Moisture**	**78.53**	**72.89**
% Ash	**1.13**	**1.01**	**% Ash**	**1.19**	**1.23**
mg% Cholesterol	**52.35**	**60.68**	**mg% Cholesterol**	**74.68**	**77.46**

FAME	% FAME	g/100g	% FAME	g/100g	FAME	% FAME	g/100g	% FAME	g/100g
14:0	0.8	0.003	1.3	0.009	14:0	1.1	0.005	0.9	0.006
15:0	0.4	0.001	0.6	0.005	15:0	0.4	0.002	0.3	0.002
16:0	17.1	0.065	31.0	0.222	16:0	18.2	0.088	15.7	0.112
17:0	0.3	0.001	0.7	0.005	17:0	0.4	0.002	0.3	0.002
18:0	4.6	0.018	9.6	0.069	18:0	3.7	0.018	3.2	0.023
20:0		0.000		0.000	20:0		0.000		0.000
22:0		0.000		0.000	22:0		0.000		0.000
16:1ω7	1.1	0.004	1.1	0.008	16:1ω7	1.0	0.005	0.9	0.006
16:1ω5	0.3	0.001		0.000	16:1ω5	0.3	0.002	0.4	0.003
18:1ω9	5.6	0.021	10.0	0.072	18:1ω9	5.7	0.028	4.8	0.034
18:1ω7	3.4	0.013	6.3	0.045	18:1ω7	3.7	0.018	3.3	0.024
18:1ω5	0.4	0.001	0.7	0.005	18:1ω5	0.3	0.002	0.3	0.002
20:1ω11	0.6	0.002	1.2	0.008	20:1ω11	0.5	0.003	0.3	0.002
20:1ω9	0.7	0.003	1.2	0.009	20:1ω9	0.7	0.003	0.5	0.004
20:1ω7	0.2	0.001	0.5	0.003	20:1ω7		0.000		0.000
Sum 20:1's	1.4	0.005	2.8	0.020	Sum 20:1's	1.2	0.006	0.8	0.006
22:1ω13+11		0.000		0.000	22:1ω13+11		0.000	0.5	0.003
22:1ω9		0.000		0.000	22:1ω9		0.000		0.000
22:1ω7		0.000		0.000	22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000	Sum 22:1's	0.0	0.000	0.5	0.003
18:2ω6	0.6	0.002	0.8	0.006	18:2ω6	0.6	0.003	0.6	0.004
20:2ω6		0.000	0.3	0.002	20:2ω6		0.000	0.2	0.001
18:3ω3	0.2	0.001	0.2	0.002	18:3ω3		0.000		0.000
20:3ω3		0.000		0.000	20:3ω3		0.000	0.1	0.001
20:3ω6		0.000		0.000	20:3ω6		0.000		0.000
18:4ω3	0.6	0.002	0.4	0.003	18:4ω3	0.8	0.004	0.6	0.004
20:4ω6	3.9	0.015	3.1	0.022	20:4ω6	3.3	0.016	3.1	0.022
20:5ω3	18.6	0.071	10.1	0.072	20:5ω3	17.7	0.086	17.4	0.124
22:5ω3	2.0	0.008	1.2	0.009	22:5ω3	2.3	0.011	2.1	0.015
22:6ω3	31.3	0.119	13.9	0.100	22:6ω3	31.1	0.151	30.8	0.219
TOTALS:					TOTALS:				
Saturates	23.3	0.088	43.2	0.310	Saturates	23.8	0.115	20.4	0.145
Monounsaturates	12.1	0.046	20.9	0.150	Monounsaturates	12.3	0.060	10.9	0.078
Polyunsaturates	57.2	0.217	30.0	0.215	Polyunsaturates	55.7	0.270	54.8	0.390
Omega-3's	52.6	0.200	25.8	0.185	Omega-3's	51.8	0.251	50.9	0.362
Omega-6's	4.6	0.017	4.2	0.030	Omega-6's	3.9	0.019	3.9	0.028

Haddock (cont.)
Melanogrammus aeglefinus

	RAW		COOKED	
Date of capture	**05/22/87**		**05/22/87**	
% Fat	**0.37**		**0.75**	
% Moisture	**82.34**		**76.42**	
% Ash	**0.95**		**0.85**	
mg% Cholesterol	**45.17**		**57.28**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	1.2	0.005	1.1	0.012
15:0		0.000	0.3	0.003
16:0	16.7	0.088	18.2	0.189
17:0		0.000		0.000
18:0	3.6	0.010	4.8	0.025
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	1.1	0.003	1.1	0.006
16:1ω5	0.4	0.001	0.4	0.002
18:1ω9	6.7	0.018	7.1	0.037
18:1ω7	2.5	0.007	2.8	0.015
18:1ω5	0.3	0.001	0.3	0.002
20:1ω11	0.4	0.001	0.4	0.002
20:1ω9	1.7	0.004	1.9	0.010
20:1ω7	0.2	0.001	0.1	0.001
Sum 20:1's	2.3	0.006	2.5	0.013
22:1ω13+11		0.000		0.000
22:1ω9		0.000	0.4	0.002
22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.4	0.002
18:2ω6	1.3	0.003	1.3	0.007
20:2ω6	0.2	0.001	0.2	0.001
18:3ω3	0.4	0.001	0.4	0.002
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3	0.5	0.001	0.4	0.002
20:4ω6	5.0	0.013	4.8	0.025
20:5ω3	16.4	0.043	14.6	0.076
22:5ω3	2.1	0.006	2.0	0.010
22:6ω3	33.8	0.089	31.9	0.166
TOTALS:				
Saturates	21.5	0.103	24.4	0.229
Monounsaturates	13.6	0.036	15.3	0.080
Polyunsaturates	59.7	0.157	55.6	0.289
Omega-3's	53.2	0.140	49.2	0.256
Omega-6's	6.5	0.017	6.4	0.033

Hake, Red
Urophycis chuss

	RAW		COOKED	
Date of capture	**10/03/85**		**10/03/85**	
% Fat	**0.45**		**0.73**	
% Moisture	**82.25**		**79.08**	
% Ash	**1.36**		**1.19**	
mg% Cholesterol	**39.52**		**45.53**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	1.1	0.003	0.8	0.004
15:0	0.3	0.001	0.2	0.001
16:0	21.8	0.065	18.7	0.096
17:0		0.000	0.2	0.001
18:0	6.0	0.018	5.1	0.026
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	1.1	0.003	1.3	0.007
16:1ω5		0.000	0.2	0.001
18:1ω9	8.1	0.024	7.1	0.036
18:1ω7	2.6	0.008	2.4	0.012
18:1ω5		0.000	0.2	0.001
20:1ω11		0.000	0.3	0.002
20:1ω9	2.2	0.007	1.7	0.009
20:1ω7		0.000		0.000
Sum 20:1's	2.2	0.007	2.0	0.010
22:1ω13+11	0.7	0.002		0.000
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.7	0.002	0.0	0.000
18:2ω6	0.8	0.002	0.7	0.004
20:2ω6		0.000		0.000
18:3ω3		0.000	0.3	0.001
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3		0.000	0.5	0.003
20:4ω6	2.3	0.007	2.3	0.012
20:5ω3	9.4	0.028	10.2	0.052
22:5ω3	1.8	0.005	2.0	0.010
22:6ω3	39.6	0.117	40.4	0.207
TOTALS:				
Saturates	29.3	0.086	25.0	0.128
Monounsaturates	14.8	0.044	13.2	0.067
Polyunsaturates	54.0	0.159	56.4	0.289
Omega-3's	50.8	0.150	53.4	0.274
Omega-6's	3.1	0.009	3.1	0.016

Hake, Red (cont.)
Urophycis chuss

	RAW	COOKED		RAW	COOKED
Date of capture	**O4/27/86**	**04/27/86**	**Date of capture**	**01/22/87**	**01/22/87**
% Fat	**0.51**	**0.66**	**% Fat**	**0.63**	**0.88**
% Moisture	**82.30**	**77.45**	**% Moisture**	**82.99**	**78.24**
% Ash	**1.07**	**1.61**	**% Ash**	**1.00**	**1.18**
mg% Cholesterol	**44.74**	**48.30**	**mg% Cholesterol**	**47.53**	**65.27**

FAME	% FAME	g/100g	% FAME	g/100g	FAME	% FAME	g/100g	% FAME	g/100g
14:0	0.4	0.001	0.3	0.002	14:0	1.2	0.005	1.0	0.006
15:0	0.2	0.001	0.2	0.001	15:0	0.3	0.001	0.2	0.001
16:0	17.7	0.059	18.3	0.081	16:0	14.5	0.060	15.3	0.097
17:0	0.2	0.001	0.2	0.001	17:0	0.3	0.001	0.3	0.002
18:0	5.4	0.018	5.4	0.024	18:0	3.7	0.015	3.8	0.024
20:0		0.000		0.000	20:0		0.000		0.000
22:0		0.000		0.000	22:0		0.000		0.000
16:1ω7	0.9	0.003	1.1	0.005	16:1ω7	2.2	0.009	2.0	0.013
16:1ω5		0.000	0.1	0.000	16:1ω5	0.2	0.001	0.2	0.001
18:1ω9	9.1	0.031	7.6	0.034	18:1ω9	9.0	0.037	9.1	0.058
18:1ω7	3.0	0.010	2.7	0.012	18:1ω7	3.7	0.015	3.7	0.023
18:1ω5	0.2	0.001	0.2	0.001	18:1ω5	0.3	0.001	0.3	0.002
20:1ω11	0.3	0.001	0.3	0.001	20:1ω11	0.5	0.002	0.4	0.003
20:1ω9	1.2	0.004	1.0	0.004	20:1ω9	2.0	0.008	1.5	0.010
20:1ω7		0.000		0.000	20:1ω7	0.2	0.001	0.2	0.001
Sum 20:1's	1.5	0.005	1.3	0.006	Sum 20:1's	2.7	0.011	2.1	0.013
22:1ω13+11		0.000		0.000	22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000	22:1ω9		0.000		0.000
22:1ω7		0.000		0.000	22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000	Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	0.6	0.002	0.5	0.002	18:2ω6	0.7	0.003	0.7	0.004
20:2ω6		0.000	0.2	0.001	20:2ω6	0.2	0.001	0.2	0.001
18:3ω3		0.000		0.000	18:3ω3	0.3	0.001	0.3	0.002
20:3ω3		0.000		0.000	20:3ω3	0.1	0.000		0.000
20:3ω6		0.000		0.000	20:3ω6		0.000		0.000
18:4ω3	0.2	0.001		0.000	18:4ω3	0.4	0.002	0.3	0.002
20:4ω6	2.5	0.008	2.4	0.010	20:4ω6	2.8	0.012	2.7	0.017
20:5ω3	10.4	0.035	10.3	0.046	20:5ω3	13.8	0.057	13.9	0.088
22:5ω3	2.5	0.008	2.6	0.012	22:5ω3	2.7	0.011	2.5	0.016
22:6ω3	42.1	0.141	42.7	0.189	22:6ω3	35.5	0.147	36.6	0.232
TOTALS:					TOTALS:				
Saturates	23.8	0.080	24.5	0.109	Saturates	20.0	0.083	20.5	0.130
Monounsaturates	14.7	0.049	13.1	0.058	Monounsaturates	18.0	0.075	17.4	0.110
Polyunsaturates	58.3	0.195	58.7	0.260	Polyunsaturates	56.4	0.235	57.2	0.362
Omega-3's	55.2	0.185	55.6	0.246	Omega-3's	52.7	0.219	53.7	0.339
Omega-6's	3.1	0.010	3.1	0.014	Omega-6's	3.7	0.015	3.6	0.023

Hake, Silver

Merluccius bilinearis

	RAW	COOKED		RAW	COOKED
Date of capture	06/19/85	06/19/85	Date of capture	04/16/86	04/16/86
% Fat	2.68	4.70	% Fat	5.59	4.94
% Moisture	79.08	75.92	% Moisture	76.07	74.17
% Ash	1.27	1.48	% Ash	1.52	1.83
mg% Cholesterol	45.62	41.10	mg% Cholesterol	37.98	42.70

FAME	% FAME	g/100g	% FAME	g/100g	FAME	% FAME	g/100g	% FAME	g/100g
14:0	4.2	0.100	N.D.	N.D.	14:0	5.5	0.282	5.1	0.231
15:0	0.4	0.010	N.D.	N.D.	15:0	0.4	0.022	0.4	0.018
16:0	15.0	0.357	N.D.	N.D.	16:0	13.5	0.697	12.8	0.583
17:0	0.2	0.005	N.D.	N.D.	17:0	0.2	0.010	0.2	0.009
18:0	2.4	0.057	N.D.	N.D.	18:0	1.8	0.095	1.9	0.087
20:0	0.1	0.003	N.D.	N.D.	20:0		0.000	0.1	0.007
22:0		0.000	N.D.	N.D.	22:0		0.000	0.1	0.002
16:1ω7	5.2	0.124	N.D.	N.D.	16:1ω7	4.9	0.252	4.7	0.212
16:1ω5	0.2	0.006	N.D.	N.D.	16:1ω5	0.3	0.013	0.3	0.011
18:1ω9	13.7	0.326	N.D.	N.D.	18:1ω9	12.3	0.636	11.6	0.527
18:1ω7	4.2	0.101	N.D.	N.D.	18:1ω7	2.6	0.136	2.4	0.110
18:1ω5	0.3	0.007	N.D.	N.D.	18:1ω5	0.3	0.018	0.3	0.016
20:1ω11		0.000	N.D.	N.D.	20:1ω11		0.000		0.000
20:1ω9	8.2	0.196	N.D.	N.D.	20:1ω9	12.4	0.639	11.9	0.543
20:1ω7	0.5	0.011	N.D.	N.D.	20:1ω7	0.3	0.015		0.000
Sum 20:1's	8.7	0.206	N.D.	N.D.	Sum 20:1's	12.7	0.654	11.9	0.543
22:1ω13+11	6.9	0.165	N.D.	N.D.	22:1ω13+11	13.8	0.711	14.3	0.649
22:1ω9	0.7	0.016	N.D.	N.D.	22:1ω9	0.7	0.036	0.1	0.005
22:1ω7	0.1	0.002	N.D.	N.D.	22:1ω7		0.000		0.000
Sum 22:1's	7.7	0.183	N.D.	N.D.	Sum 22:1's	14.5	0.747	14.4	0.653
18:2ω6	1.7	0.039	N.D.	N.D.	18:2ω6	1.6	0.082	1.5	0.069
20:2ω6	0.3	0.008	N.D.	N.D.	20:2ω6	0.2	0.011	0.2	0.010
18:3ω3	0.8	0.019	N.D.	N.D.	18:3ω3	0.9	0.049	0.9	0.042
20:3ω3	0.3	0.007	N.D.	N.D.	20:3ω3	0.1	0.008	0.2	0.007
20:3ω6	0.1	0.001	N.D.	N.D.	20:3ω6		0.000	0.1	0.003
18:4ω3	2.2	0.053	N.D.	N.D.	18:4ω3	2.1	0.110	2.1	0.097
20:4ω6	0.8	0.020	N.D.	N.D.	20:4ω6	0.7	0.035	0.9	0.041
20:5ω3	8.8	0.208	N.D.	N.D.	20:5ω3	6.1	0.314	6.6	0.298
22:5ω3	1.0	0.023	N.D.	N.D.	22:5ω3	1.2	0.060	1.1	0.049
22:6ω3	15.4	0.365	N.D.	N.D.	22:6ω3	13.3	0.688	14.1	0.638
TOTALS:					TOTALS:				
Saturates	22.4	0.534			Saturates	21.4	1.105	20.7	0.938
Monounsaturates	40.1	0.952			Monounsaturates	47.5	2.456	45.7	2.073
Polyunsaturates	31.3	0.745			Polyunsaturates	26.2	1.356	27.6	1.254
Omega-3's	28.4	0.675			Omega-3's	23.8	1.227	24.9	1.131
Omega-6's	2.9	0.069			Omega-6's	2.5	0.129	2.7	0.123

Hake, Silver (cont.)
Merluccius bilinearis

	RAW	COOKED
Date of capture	**09/18/86**	**09/18/86**
% Fat	**2.86**	**3.23**
% Moisture	**79.51**	**77.51**
% Ash	**1.19**	**1.33**
mg% Cholesterol	**50.54**	**57.96**

FAME	% FAME	g/100g	% FAME	g/100g
14:0	4.6	0.116	4.9	0.141
15:0	0.5	0.012	0.5	0.015
16:0	14.1	0.358	14.8	0.427
17:0	0.3	0.007	0.3	0.008
18:0	2.2	0.057	2.3	0.065
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	4.5	0.116	5.1	0.148
16:1ω5	0.5	0.012	0.5	0.014
18:1ω9	11.0	0.280	11.4	0.328
18:1ω7	3.3	0.083	3.7	0.106
18:1ω5	0.3	0.008	0.3	0.009
20:1ω11		0.000		0.000
20:1ω9	5.9	0.150	5.2	0.148
20:1ω7	0.3	0.007	0.3	0.008
Sum 20:1's	6.2	0.157	5.4	0.157
22:1ω13+11	5.9	0.151	5.1	0.146
22:1ω9	0.4	0.009		0.000
22:1ω7		0.000		0.000
Sum 22:1's	6.3	0.160	5.1	0.146
18:2ω6	1.7	0.044	1.7	0.050
20:2ω6	0.2	0.006		0.000
18:3ω3	1.2	0.032	1.2	0.035
20:3ω3	0.2	0.006		0.000
20:3ω6		0.000		0.000
18:4ω3	2.7	0.070	2.7	0.078
20:4ω6	0.9	0.023	1.0	0.029
20:5ω3	8.7	0.222	10.6	0.304
22:5ω3	1.0	0.024	0.9	0.027
22:6ω3	18.9	0.480	18.4	0.530
TOTALS:				
Saturates	21.6	0.550	22.7	0.655
Monounsaturates	32.1	0.816	31.5	0.907
Polyunsaturates	35.6	0.906	36.5	1.053
Omega-3's	32.8	0.833	33.8	0.974
Omega-6's	2.9	0.073	2.7	0.079

	RAW	COOKED
Date of capture	**12/17/86**	**12/17/86**
% Fat	**4.44**	**6.83**
% Moisture	**78.06**	**73.27**
% Ash	**1.35**	**1.22**
mg% Cholesterol	**47.45**	**50.95**

FAME	% FAME	g/100g	% FAME	g/100g
14:0	6.8	0.275	6.7	0.422
15:0	0.4	0.018	0.4	0.026
16:0	13.7	0.554	12.7	0.804
17:0	0.2	0.007	0.2	0.010
18:0	1.4	0.058	1.3	0.084
20:0		0.000	0.1	0.008
22:0		0.000		0.000
16:1ω7	5.2	0.210	5.1	0.326
16:1ω5	0.3	0.013	0.3	0.018
18:1ω9	11.4	0.463	11.3	0.714
18:1ω7	2.2	0.090	2.2	0.137
18:1ω5	0.3	0.012	0.3	0.019
20:1ω11	1.7	0.071		0.000
20:1ω9	13.1	0.532	15.1	0.953
20:1ω7	0.2	0.008	0.3	0.021
Sum 20:1's	15.1	0.611	15.4	0.974
22:1ω13+11	15.3	0.618	16.5	1.042
22:1ω9	0.7	0.026	0.7	0.045
22:1ω7		0.000		0.000
Sum 22:1's	15.9	0.645	17.2	1.088
18:2ω6	1.6	0.065	1.6	0.100
20:2ω6		0.000	0.2	0.011
18:3ω3	0.9	0.037	0.9	0.056
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3	1.9	0.076	1.8	0.115
20:4ω6	0.5	0.022	0.5	0.033
20:5ω3	5.7	0.233	5.8	0.366
22:5ω3	1.2	0.048	1.2	0.073
22:6ω3	12.3	0.499	10.9	0.693
TOTALS:				
Saturates	22.5	0.911	21.4	1.354
Monounsaturates	50.4	2.044	51.7	3.275
Polyunsaturates	24.2	0.980	22.8	1.446
Omega-3's	22.0	0.892	20.6	1.303
Omega-6's	2.2	0.087	2.3	0.143

Hake, White
Urophycis tenuis

	RAW		COOKED	
Date of capture	**10/30/86**		**10/30/86**	
% Fat	**0.84**		**0.92**	
% Moisture	**82.37**		**78.80**	
% Ash	**1.29**		**1.42**	
mg% Cholesterol	**48.91**		**58.18**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	1.0	0.006	0.7	0.005
15:0	0.2	0.001	0.2	0.001
16:0	13.6	0.084	14.8	0.101
17:0	0.3	0.002	0.3	0.002
18:0	4.3	0.026	4.8	0.033
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	3.2	0.020	2.7	0.018
16:1ω5	0.1	0.001	0.1	0.001
18:1ω9	11.1	0.068	8.8	0.060
18:1ω7	4.1	0.025	4.0	0.028
18:1ω5	0.2	0.001	0.3	0.002
20:1ω11		0.000		0.000
20:1ω9	3.9	0.024	2.2	0.015
20:1ω7	0.2	0.001	0.2	0.002
Sum 20:1's	4.1	0.025	2.4	0.017
22:1ω13+11	3.1	0.019	1.7	0.012
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	3.1	0.019	1.7	0.012
18:2ω6	0.8	0.005	0.6	0.004
20:2ω6	0.3	0.002	0.2	0.001
18:3ω3	0.2	0.001	0.2	0.001
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3	0.2	0.002	0.2	0.001
20:4ω6	2.1	0.013	2.4	0.016
20:5ω3	9.7	0.060	11.3	0.077
22:5ω3	2.1	0.013	2.2	0.015
22:6ω3	28.3	0.174	29.9	0.204
TOTALS:				
Saturates	19.4	0.119	20.9	0.142
Monounsaturates	26.0	0.160	20.0	0.136
Polyunsaturates	43.7	0.269	46.9	0.320
Omega-3's	40.6	0.249	43.7	0.298
Omega-6's	3.1	0.019	3.2	0.022

Herring, Atlantic
Clupea harengus harengus

	RAW	COOKED		RAW	COOKED
Date of capture	**07/03/85**	**07/03/85**	**Date of capture**	**01/31/86**	**01/31/86**
% Fat	**12.19**	**13.48**	**% Fat**	**5.19**	**3.59**
% Moisture	**67.40**	**65.69**	**% Moisture**	**73.46**	**74.95**
% Ash	**1.10**	**0.99**	**% Ash**	**2.11**	**1.57**
mg% Cholesterol	**44.40**	**43.73**	**mg% Cholesterol**	**39.38**	**43.74**

FAME	% FAME	g/100g	% FAME	g/100g	FAME	% FAME	g/100g	% FAME	g/100g
14:0	7.2	0.829	7.1	0.905	14:0	7.0	0.334	6.2	0.200
15:0	0.5	0.056	0.5	0.062	15:0	0.5	0.023	0.4	0.012
16:0	12.7	1.453	12.8	1.631	16:0	12.2	0.583	11.8	0.382
17:0	0.2	0.017	0.1	0.019	17:0	0.2	0.008	0.1	0.005
18:0	0.9	0.106	0.9	0.117	18:0	1.2	0.059	1.2	0.038
20:0	0.2	0.018	0.1	0.019	20:0		0.000		0.000
22:0		0.000		0.000	22:0		0.000		0.000
16:1ω7	5.1	0.588	5.6	0.711	16:1ω7	4.3	0.204	3.6	0.117
16:1ω5	0.4	0.047	0.4	0.052	16:1ω5	0.2	0.012	0.2	0.008
18:1ω9	6.5	0.741	6.3	0.806	18:1ω9	10.0	0.476	8.7	0.282
18:1ω7	1.4	0.160	1.5	0.193	18:1ω7	2.0	0.096	1.6	0.050
18:1ω5	0.4	0.047	0.4	0.052	18:1ω5	0.3	0.014	0.3	0.010
20:1ω11	0.9	0.107		0.000	20:1ω11		0.000		0.000
20:1ω9	11.0	1.259	11.3	1.429	20:1ω9	13.2	0.629	15.9	0.516
20:1ω7		0.000	0.3	0.038	20:1ω7		0.000		0.000
Sum 20:1's	11.9	1.366	11.6	1.468	Sum 20:1's	13.2	0.629	15.9	0.516
22:1ω13+11	20.8	2.383	20.7	2.627	22:1ω13+11	26.7	1.275	27.6	0.897
22:1ω9	0.8	0.095	0.9	0.117	22:1ω9	0.2	0.008	0.2	0.006
22:1ω7	0.1	0.015	0.1	0.018	22:1ω7		0.000		0.000
Sum 22:1's	21.7	2.493	21.7	2.762	Sum 22:1's	26.8	1.283	27.8	0.903
18:2ω6	1.4	0.166	1.4	0.174	18:2ω6	1.1	0.052	1.0	0.033
20:2ω6	0.3	0.030	0.2	0.030	20:2ω6	0.2	0.008	0.2	0.006
18:3ω3	1.2	0.140	1.1	0.138	18:3ω3	0.7	0.031	0.5	0.017
20:3ω3	0.1	0.016	0.1	0.017	20:3ω3	0.2	0.008	0.1	0.003
20:3ω6		0.000		0.000	20:3ω6	0.0	0.002		0.000
18:4ω3	3.8	0.430	3.4	0.437	18:4ω3	1.0	0.046	1.0	0.031
20:4ω6	0.4	0.047	0.5	0.058	20:4ω6	0.7	0.033	0.6	0.020
20:5ω3	7.3	0.837	7.3	0.931	20:5ω3	4.5	0.216	4.1	0.134
22:5ω3	0.7	0.082	0.7	0.088	22:5ω3	0.5	0.026	0.7	0.021
22:6ω3	10.0	1.152	10.0	1.266	22:6ω3	7.4	0.354	9.3	0.302
TOTALS:					TOTALS:				
Saturates	21.6	2.480	21.7	2.752	Saturates	21.1	1.008	19.6	0.637
Monounsaturates	47.4	5.441	47.6	6.044	Monounsaturates	56.8	2.715	58.0	1.885
Polyunsaturates	25.3	2.901	24.7	3.138	Polyunsaturates	16.2	0.777	17.5	0.567
Omega-3's	23.2	2.658	22.6	2.877	Omega-3's	14.2	0.681	15.7	0.508
Omega-6's	2.1	0.243	2.1	0.262	Omega-6's	2.0	0.095	1.8	0.059

Herring, Atlantic (cont.)
Clupea harengus harengus

	RAW	COOKED
Date of capture	07/21/86	07/21/86
% Fat	10.68	11.36
% Moisture	69.29	64.06
% Ash	2.53	2.69
mg% Cholesterol	84.00	86.99

FAME	% FAME	g/100g	% FAME	g/100g
14:0	7.5	0.745	6.2	0.654
15:0		0.000	0.4	0.039
16:0	12.0	1.193	11.0	1.174
17:0		0.000		0.000
18:0	0.9	0.089	0.9	0.098
20:0		0.000	0.2	0.017
22:0		0.000		0.000
16:1ω7	5.6	0.556	4.8	0.513
16:1ω5		0.000		0.000
18:1ω9	5.4	0.543	5.2	0.556
18:1ω7	1.5	0.154	1.5	0.162
18:1ω5	0.4	0.036	0.3	0.037
20:1ω11		0.000		0.000
20:1ω9	12.9	1.287	13.0	1.379
20:1ω7		0.000		0.000
Sum 20:1's	12.9	1.287	13.0	1.379
22:1ω13+11	24.4	2.437	25.3	2.686
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	24.4	2.437	25.3	2.686
18:2ω6	1.3	0.126	1.1	0.121
20:2ω6		0.000	0.2	0.019
18:3ω3	0.9	0.088	0.8	0.088
20:3ω3		0.000	0.1	0.011
20:3ω6		0.000	0.1	0.008
18:4ω3	2.5	0.251	2.6	0.275
20:4ω6	0.3	0.027	0.3	0.031
20:5ω3	7.3	0.729	7.5	0.799
22:5ω3	0.8	0.084	0.9	0.092
22:6ω3	9.3	0.927	10.8	1.151
TOTALS:				
Saturates	20.1	2.027	18.5	1.968
Monounsaturates	50.2	5.013	50.2	7.301
Polyunsaturates	22.4	2.232	24.8	2.641
Omega-3's	20.8	2.079	23.2	2.462
Omega-6's	1.5	0.153	1.7	0.179

	RAW	COOKED
Date of capture	11/15/86	11/15/86
% Fat	6.87	9.12
% Moisture	75.25	67.31
% Ash	2.01	3.15
mg% Cholesterol	93.13	113.34

FAME	% FAME	g/100g	% FAME	g/100g
14:0	8.4	0.531	9.0	0.763
15:0	0.4	0.026	0.4	0.036
16:0	11.8	0.747	12.0	1.015
17:0		0.000		0.000
18:0	1.1	0.073	1.0	0.088
20:0	0.2	0.010	0.2	0.014
22:0		0.000		0.000
16:1ω7	5.0	0.320	5.3	0.451
16:1ω5	0.3	0.018	0.3	0.025
18:1ω9	5.4	0.343	5.5	0.467
18:1ω7	1.3	0.079	1.4	0.117
18:1ω5	0.3	0.022	0.3	0.029
20:1ω11		0.000		0.000
20:1ω9	11.6	0.734	11.3	0.954
20:1ω7	0.2	0.012	0.2	0.015
Sum 20:1ω's	11.8	0.746	11.5	0.969
22:1ω13+11	22.4	1.418	22.1	1.874
22:1ω9	0.9	0.054	0.8	0.069
22:1ω7	0.1	0.008	0.1	0.010
Sum 22:1ω's	23.3	1.480	23.1	1.953
18:2ω6	0.9	0.059	1.1	0.092
20:2ω6	0.1	0.008	0.1	0.010
18:3ω3	0.7	0.045	0.8	0.065
20:3ω3	0.1	0.005	0.1	0.007
20:3ω6	0.0	0.002		0.000
18:4ω3	1.6	0.104	1.8	0.150
20:4ω6	0.4	0.027	0.4	0.035
20:5ω3	7.2	0.455	7.2	0.608
22:5ω3	1.0	0.061	0.9	0.079
22:6ω3	10.0	0.631	9.2	0.781
24:1ω?	0.6	0.041	0.6	0.052
TOTALS:				
Saturates	21.9	1.387	22.6	1.916
Monounsaturates	47.5	3.008	47.4	4.011
Polyunsaturates	22.5	1.438	22.2	1.879
Omega-3's	20.5	1.301	20.0	1.683
Omega-6's	1.5	0.096	1.6	0.137

Mackerel, Atlantic
Scomber scrombrus

	RAW	COOKED		RAW	COOKED
Date of capture	**07/02/86**	**07/02/86**	**Date of capture**	**06/11/87**	**06/11/87**
% Fat	**7.06**	**7.38**	**% Fat**	**1.75**	**1.90**
% Moisture	**70.65**	**67.38**	**% Moisture**	**75.94**	**74.70**
% Ash	**1.57**	**1.54**	**% Ash**	**1.11**	**0.84**
mg% Cholesterol	**49.75**	**55.83**	**mg% Cholesterol**	**95.32**	**102.26**

FAME	% FAME	g/100g	% FAME	g/100g	FAME	% FAME	g/100g	% FAME	g/100g
14:0	5.8	0.380	5.7	0.394	14:0	2.8	0.081	2.5	0.079
15:0	0.4	0.027	0.4	0.028	15:0		0.000		0.000
16:0	13.4	0.880	13.2	0.904	16:0	12.3	0.354	13.6	0.434
17:0	0.3	0.019	0.3	0.020	17:0		0.000		0.000
18:0	2.8	0.187	3.0	0.205	18:0	3.9	0.056	4.9	0.078
20:0		0.000		0.000	20:0		0.000		0.000
22:0		0.000		0.000	22:0		0.000		0.000
16:1ω7	3.4	0.224	3.5	0.238	16:1ω7	2.0	0.029	1.6	0.026
16:1ω5	0.3	0.022	0.3	0.024	16:1ω5		0.000		0.000
18:1ω9	7.6	0.497	8.2	0.560	18:1ω9	6.4	0.092	5.8	0.092
18:1ω7	1.9	0.125	2.0	0.139	18:1ω7	2.1	0.030	2.4	0.039
18:1ω5	0.4	0.026	0.4	0.027	18:1ω5		0.000		0.000
20:1ω11		0.000		0.000	20:1ω11		0.000		0.000
20:1ω9	12.6	0.826	12.4	0.853	20:1ω9	11.5	0.166	9.4	0.150
20:1ω7		0.000	0.3	0.022	20:1ω7	0.9	0.013	0.4	0.006
Sum 20:1's	12.6	0.826	12.7	0.875	Sum 20:1's	12.4	0.179	9.8	0.156
22:1ω13+11	21.4	1.407	20.4	1.402	22:1ω13+11	16.8	0.243	13.8	0.220
22:1ω9	1.2	0.077	1.2	0.079	22:1ω9	1.5	0.022	1.3	0.020
22:1ω7		0.000		0.000	22:1ω7		0.000		0.000
Sum 22:1's	22.6	1.483	21.6	1.481	Sum 22:1's	18.4	0.265	15.1	0.240
18:2ω6	1.7	0.112	1.7	0.119	18:2ω6	1.3	0.019	1.4	0.023
20:2ω6		0.000		0.000	20:2ω6	0.3	0.004	0.3	0.004
18:3ω3	1.4	0.089	1.3	0.089	18:3ω3	0.5	0.007	0.5	0.008
20:3ω3		0.000		0.000	20:3ω3		0.000		0.000
20:3ω6		0.000		0.000	20:3ω6		0.000		0.000
18:4ω3	3.5	0.228	3.4	0.231	18:4ω3	0.8	0.011	0.7	0.011
20:4ω6		0.000		0.000	20:4ω6	0.7	0.010	1.0	0.016
20:5ω3	5.2	0.341	5.3	0.362	20:5ω3	5.5	0.079	6.7	0.106
22:5ω3	1.0	0.069	1.0	0.069	22:5ω3	1.4	0.020	1.6	0.026
22:6ω3	12.3	0.809	12.1	0.831	22:6ω3	21.5	0.310	25.7	0.408
TOTALS:					TOTALS:				
Saturates	22.8	1.493	22.6	1.550	Saturates	19.0	0.491	21.1	0.592
Monounsaturates	48.8	3.203	48.7	3.343	Monounsaturates	43.8	0.631	35.8	0.569
Polyunsaturates	25.1	1.648	24.8	1.702	Polyunsaturates	32.0	0.461	37.9	0.602
Omega-3's	23.4	1.536	23.1	1.583	Omega-3's	29.7	0.427	35.2	0.560
Omega-6's	1.7	0.112	1.7	0.119	Omega-6's	2.3	0.034	2.7	0.043

Monkfish
Lophius americanus

	RAW	COOKED		RAW	COOKED
Date of capture	**11/01/85**	**11/01/85**	**Date of capture**	**07/31/86**	**07/31/86**
% Fat	**0.31**	**0.80**	**% Fat**	**0.58**	**0.86**
% Moisture	**84.96**	**76.86**	**% Moisture**	**81.65**	**73.94**
% Ash	**1.12**	**1.06**	**% Ash**	**1.04**	**1.04**
mg% Cholesterol	**42.78**	**81.10**	**mg% Cholesterol**	**53.23**	**75.67**

FAME	% FAME	g/100g	% FAME	g/100g	FAME	% FAME	g/100g	% FAME	g/100g
14:0	1.3	0.003	0.8	0.005	14:0	1.3	0.005	1.0	0.006
15:0	0.3	0.001	0.2	0.001	15:0	0.2	0.001	0.2	0.001
16:0	22.0	0.042	16.1	0.088	16:0	14.6	0.055	14.8	0.090
17:0		0.000		0.000	17:0	0.1	0.000	0.7	0.004
18:0	6.8	0.013	6.2	0.034	18:0	3.5	0.013	3.5	0.021
20:0		0.000		0.000	20:0		0.000		0.000
22:0		0.000		0.000	22:0		0.000		0.000
16:1ω7	4.0	0.008	2.7	0.015	16:1ω7	2.5	0.010	2.0	0.012
16:1ω5		0.000		0.000	16:1ω5	0.3	0.001	0.3	0.002
18:1ω9	11.2	0.022	10.2	0.056	18:1ω9	9.4	0.036	7.2	0.044
18:1ω7	3.6	0.007	3.5	0.019	18:1ω7	2.6	0.010	1.9	0.012
18:1ω5		0.000		0.000	18:1ω5		0.000	0.2	0.001
20:1ω11		0.000		0.000	20:1ω11		0.000		0.000
20:1ω9	1.6	0.003	1.6	0.009	20:1ω9	3.7	0.014	3.2	0.019
20:1ω7		0.000		0.000	20:1ω7		0.000		0.000
Sum 20:1's	1.6	0.003	1.6	0.009	Sum 20:1's	3.7	0.014	3.2	0.019
22:1ω13+11		0.000	0.6	0.003	22:1ω13+11	1.5	0.006	1.3	0.008
22:1ω9		0.000		0.000	22:1ω9		0.000		0.000
22:1ω7		0.000		0.000	22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.6	0.003	Sum 22:1's	1.5	0.006	1.3	0.008
18:2ω6	1.8	0.003	1.4	0.008	18:2ω6	1.5	0.006	1.4	0.009
20:2ω6		0.000		0.000	20:2ω6		0.000		0.000
18:3ω3		0.000		0.000	18:3ω3	0.2	0.001	0.3	0.002
20:3ω3		0.000		0.000	20:3ω3		0.000		0.000
20:3ω6		0.000		0.000	20:3ω6		0.000		0.000
18:4ω3		0.000		0.000	18:4ω3	0.4	0.002	0.5	0.003
20:4ω6	6.3	0.012	5.8	0.032	20:4ω6	2.8	0.011	3.1	0.019
20:5ω3	10.6	0.020	9.5	0.052	20:5ω3	7.0	0.027	7.6	0.046
22:5ω3	2.0	0.004	2.0	0.011	22:5ω3	1.4	0.005	1.3	0.008
22:6ω3	23.3	0.045	24.8	0.136	22:6ω3	28.8	0.109	28.2	0.172
TOTALS:					TOTALS:				
Saturates	30.4	0.059	23.4	0.128	Saturates	19.7	0.075	20.3	0.123
Monounsaturates	20.4	0.039	18.7	0.102	Monounsaturates	20.0	0.076	16.1	0.098
Polyunsaturates	43.9	0.084	43.6	0.238	Polyunsaturates	42.1	0.160	42.3	0.257
Omega-3's	35.8	0.069	36.3	0.198	Omega-3's	37.8	0.143	37.9	0.230
Omega-6's	8.1	0.016	7.3	0.040	Omega-6's	4.3	0.016	4.5	0.027

Ocean Perch
Sebastes fasciatus

	RAW		COOKED	
Date of capture	**07/10/85**		**07/10/85**	
% Fat	**1.09**		**1.03**	
% Moisture	**78.66**		**75.83**	
% Ash	**1.50**		**0.81**	
mg% Cholesterol	**53.07**		**60.87**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	N.D.	N.D.	N.D.	N.D.
15:0	N.D.	N.D.	N.D.	N.D.
16:0	N.D.	N.D.	N.D.	N.D.
17:0	N.D.	N.D.	N.D.	N.D.
18:0	N.D.	N.D.	N.D.	N.D.
20:0	N.D.	N.D.	N.D.	N.D.
22:0	N.D.	N.D.	N.D.	N.D.
24:0	N.D.	N.D.	N.D.	N.D.
16:1ω7	N.D.	N.D.	N.D.	N.D.
16:1ω5	N.D.	N.D.	N.D.	N.D.
18:1ω9	N.D.	N.D.	N.D.	N.D.
18:1ω7	N.D.	N.D.	N.D.	N.D.
18:1ω5	N.D.	N.D.	N.D.	N.D.
20:1ω11	N.D.	N.D.	N.D.	N.D.
20:1ω9	N.D.	N.D.	N.D.	N.D.
20:1ω7	N.D.	N.D.	N.D.	N.D.
Sum 20:1's	N.D.	N.D.	N.D.	N.D.
22:1ω13+11	N.D.	N.D.	N.D.	N.D.
22:1ω9	N.D.	N.D.	N.D.	N.D.
22:1ω7	N.D.	N.D.	N.D.	N.D.
Sum 22:1's	N.D.	N.D.	N.D.	N.D.
18:2ω6	N.D.	N.D.	N.D.	N.D.
20:2ω6	N.D.	N.D.	N.D.	N.D.
18:3ω3	N.D.	N.D.	N.D.	N.D.
20:3ω3	N.D.	N.D.	N.D.	N.D.
20:3ω6	N.D.	N.D.	N.D.	N.D.
18:4ω3	N.D.	N.D.	N.D.	N.D.
20:4ω6	N.D.	N.D.	N.D.	N.D.
20:5ω3	N.D.	N.D.	N.D.	N.D.
22:5ω3	N.D.	N.D.	N.D.	N.D.
22:6ω3	N.D.	N.D.	N.D.	N.D.

	RAW		COOKED	
Date of capture	**09/25/86**		**09/25/86**	
% Fat	**1.87**		**2.10**	
% Moisture	**78.43**		**74.36**	
% Ash	**1.20**		**1.28**	
mg% Cholesterol	**59.61**		**65.71**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	5.4	0.086	4.2	0.077
15:0	0.5	0.007	0.4	0.007
16:0	13.7	0.217	13.4	0.242
17:0	0.2	0.004	0.2	0.004
18:0	2.6	0.041	2.8	0.051
20:0		0.000	0.1	0.002
22:0		0.000		0.000
16:1ω7	5.0	0.080	4.6	0.084
16:1ω5	0.4	0.006	0.4	0.006
18:1ω9	10.7	0.169	10.8	0.195
18:1ω7	2.9	0.046	2.9	0.053
18:1ω5	0.5	0.008	0.5	0.009
20:1ω11	0.8	0.012	0.7	0.013
20:1ω9	5.0	0.079	5.1	0.091
20:1ω7	0.3	0.005	0.3	0.006
Sum 20:1's	6.0	0.096	6.1	0.110
22:1ω13+11	6.5	0.103	6.5	0.116
22:1ω9	0.6	0.009	0.6	0.011
22:1ω7		0.000		0.000
Sum 22:1's	7.1	0.112	7.1	0.128
18:2ω6	1.5	0.024	1.5	0.027
20:2ω6	0.2	0.004	0.2	0.004
18:3ω3	0.9	0.014	0.8	0.014
20:3ω3		0.000	0.1	0.002
20:3ω6		0.000		0.000
18:4ω3	2.3	0.037	1.9	0.034
20:4ω6	1.5	0.024	1.7	0.030
20:5ω3	11.0	0.175	10.8	0.195
22:5ω3	1.0	0.016	1.0	0.019
22:6ω3	20.4	0.324	22.4	0.405
TOTALS:				
Saturates	22.4	0.356	21.2	0.383
Monounsaturates	32.6	0.518	32.4	0.585
Polyunsaturates	38.8	0.617	40.5	0.730
Omega-3's	35.5	0.565	37.1	0.669
Omega-6's	3.3	0.052	3.4	0.061

Ocean Pout

Macrozoarces americanus

	RAW	COOKED
Date of capture	01/05/87	01/05/87
% Fat	0.63	1.15
% Moisture	82.00	74.36
% Ash	1.12	1.05
mg% Cholesterol	63.25	94.62

FAME	% FAME	g/100g	% FAME	g/100g
14:0	1.1	0.005	0.9	0.008
15:0	0.2	0.001	0.2	0.002
16:0	14.4	0.058	14.4	0.124
17:0	0.3	0.001	0.3	0.002
18:0	4.9	0.020	4.2	0.037
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	2.5	0.010	3.7	0.032
16:1ω5	0.3	0.001	0.3	0.002
18:1ω9	12.7	0.052	14.1	0.122
18:1ω7	4.2	0.017	4.5	0.039
18:1ω5	0.4	0.002	0.4	0.003
20:1ω11	1.3	0.005	1.2	0.010
20:1ω9	0.9	0.004	0.9	0.007
20:1ω7	0.8	0.003	1.0	0.009
Sum 20:1's	3.0	0.012	3.1	0.027
22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	0.6	0.002	0.6	0.005
20:2ω6	0.3	0.001	0.4	0.004
18:3ω3	0.2	0.001	0.3	0.003
20:3ω3		0.000	0.2	0.002
20:3ω6		0.000		0.000
18:4ω3	0.3	0.001	0.3	0.002
20:4ω6	3.5	0.014	3.1	0.026
20:5ω3	20.7	0.084	20.7	0.178
22:5ω3	2.5	0.010	3.3	0.029
22:6ω3	18.7	0.076	16.9	0.146
TOTALS:				
Saturates	21.0	0.085	20.0	0.173
Monounsaturates	23.2	0.094	26.0	0.224
Polyunsaturates	46.8	0.189	45.8	0.395
Omega-3's	42.4	0.172	41.7	0.359
Omega-6's	4.4	0.018	4.1	0.035

	RAW	COOKED
Date of capture	05/08/87	05/08/87
% Fat	1.07	1.60
% Moisture	79.65	73.04
% Ash	0.82	0.90
mg% Cholesterol	98.01	147.23

FAME	% FAME	g/100g	% FAME	g/100g
14:0	2.1	0.033	2.2	0.056
15:0		0.000		0.000
16:0	12.7	0.199	12.7	0.323
17:0		0.000		0.000
18:0	3.8	0.030	3.8	0.048
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	4.1	0.032	4.0	0.050
16:1ω5	0.2	0.002	0.2	0.003
18:1ω9	14.5	0.113	16.1	0.204
18:1ω7	3.9	0.031	3.7	0.047
18:1ω5	0.4	0.003	0.4	0.005
20:1ω11	2.5	0.020	2.5	0.032
20:1ω9	1.1	0.009	1.7	0.022
20:1ω7	1.1	0.009	0.8	0.010
Sum 20:1's	4.8	0.038	5.1	0.064
22:1ω13+11	1.1	0.008	1.3	0.017
22:1ω9	0.3	0.002	0.3	0.003
22:1ω7		0.000		0.000
Sum 22:1's	1.3	0.010	1.6	0.020
18:2ω6	0.5	0.004	0.6	0.008
20:2ω6	0.7	0.005	0.2	0.003
18:3ω3	0.2	0.001	0.2	0.002
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3	0.3	0.002	0.3	0.004
20:4ω6	4.5	0.035	3.9	0.050
20:5ω3	17.1	0.134	15.9	0.202
22:5ω3	1.6	0.013	1.4	0.018
22:6ω3	16.5	0.129	18.6	0.237
TOTALS:				
Saturates	18.7	0.262	18.7	0.427
Monounsaturates	29.7	0.232	31.5	0.399
Polyunsaturates	41.4	0.324	41.3	0.523
Omega-3's	35.7	0.280	36.5	0.463
Omega-6's	5.7	0.044	4.8	0.060

Pollock
Pollachius virens

	RAW	COOKED
Date of capture	09/06/85	09/06/85
% Fat	0.45	1.05
% Moisture	80.16	75.59
% Ash	1.33	1.60
mg% Cholesterol	54.88	60.72

FAME	% FAME	g/100g	% FAME	g/100g
14:0	1.2	0.003	1.2	0.010
15:0	0.3	0.001	0.3	0.002
16:0	17.6	0.050	18.0	0.145
17:0	0.2	0.001	0.2	0.002
18:0	4.9	0.014	5.0	0.041
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	1.0	0.003	1.0	0.008
16:1ω5	0.2	0.001	0.2	0.002
18:1ω9	8.8	0.025	9.1	0.073
18:1ω7	3.1	0.009	3.4	0.027
18:1ω5		0.000	0.2	0.002
20:1ω11		0.000		0.000
20:1ω9	1.8	0.005	1.9	0.016
20:1ω7		0.000		0.000
Sum 20:1's	1.8	0.005	1.9	0.016
22:1ω13+11	0.8	0.002	0.8	0.006
22:1ω9		0.000	0.1	0.001
22:1ω7		0.000		0.000
Sum 22:1's	0.8	0.002	0.9	0.007
18:2ω6	1.0	0.003	1.1	0.009
20:2ω6		0.000	0.2	0.002
18:3ω3	0.3	0.001	0.4	0.003
20:3ω3		0.000	0.3	0.002
20:3ω6		0.000		0.000
18:4ω3	0.5	0.001	0.6	0.005
20:4ω6	2.0	0.006	2.1	0.017
20:5ω3	13.0	0.037	13.7	0.110
22:5ω3	1.2	0.003	1.1	0.009
22:6ω3	36.7	0.104	35.6	0.286
TOTALS:				
Saturates	24.2	0.069	24.7	0.199
Monounsaturates	15.8	0.045	16.8	0.135
Polyunsaturates	54.7	0.156	55.2	0.444
Omega-3's	51.7	0.147	51.7	0.416
Omega-6's	3.0	0.009	3.5	0.028

	RAW	COOKED
Date of capture	01/10/86	01/10/86
% Fat	0.59	0.84
% Moisture	78.25	74.84
% Ash	1.57	1.41
mg% Cholesterol	58.06	63.51

FAME	% FAME	g/100g	% FAME	g/100g
14:0	0.8	0.003	0.8	0.005
15:0	0.2	0.001	0.2	0.001
16:0	14.4	0.055	14.8	0.089
17:0	0.4	0.002	0.4	0.002
18:0	4.9	0.019	4.7	0.028
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	1.3	0.005	1.3	0.008
16:1ω5	0.2	0.001	0.2	0.001
18:1ω9	9.8	0.037	8.4	0.051
18:1ω7	3.4	0.013	3.1	0.019
18:1ω5	0.1	0.001	0.1	0.001
20:1ω11	0.3	0.001		0.000
20:1ω9	2.0	0.008	2.3	0.014
20:1ω7		0.000	0.1	0.001
Sum 20:1's	2.3	0.009	2.4	0.015
22:1ω13+11	0.7	0.003	1.2	0.007
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.7	0.003	1.2	0.007
18:2ω6	1.0	0.004	0.9	0.005
20:2ω6		0.000		0.000
18:3ω3	0.4	0.002	0.4	0.003
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3	0.6	0.002	0.6	0.003
20:4ω6	1.8	0.007	1.8	0.011
20:5ω3	11.4	0.043	11.5	0.069
22:5ω3	1.2	0.004	0.9	0.006
22:6ω3	40.4	0.155	38.4	0.231
TOTALS:				
Saturates	20.7	0.079	20.9	0.126
Monounsaturates	17.8	0.068	16.8	0.101
Polyunsaturates	56.8	0.217	54.5	0.328
Omega-3's	53.9	0.207	51.8	0.311
Omega-6's	2.8	0.011	2.7	0.016

Skate, Thorny
Raja radiata

	RAW		COOKED	
Date of capture	**02/25/86**		**02/25/86**	
% Fat	**0.69**		**0.90**	
% Moisture	**79.51**		**76.40**	
% Ash	**1.25**		**1.11**	
mg% Cholesterol	**55.76**		**80.39**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	0.4	0.002	0.5	0.003
15:0	0.4	0.002	0.3	0.002
16:0	18.6	0.086	21.1	0.135
17:0	1.3	0.006	0.9	0.006
18:0	5.6	0.026	5.2	0.034
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	1.8	0.008	1.8	0.012
16:1ω5	0.4	0.002	0.4	0.003
18:1ω9	8.0	0.037	10.1	0.065
18:1ω7	4.9	0.023	5.0	0.032
18:1ω5	0.5	0.002	0.6	0.004
20:1ω11	0.4	0.002		0.000
20:1ω9	1.1	0.005	1.3	0.008
20:1ω7	0.4	0.002		0.000
Sum 20:1's	1.9	0.009	1.3	0.008
22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	1.1	0.005	1.2	0.008
20:2ω6		0.000	0.3	0.002
18:3ω3	0.2	0.001		0.000
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3		0.000		0.000
20:4ω6	4.3	0.020	5.2	0.034
20:5ω3	9.4	0.044	7.0	0.045
22:5ω3	5.6	0.026	4.5	0.029
22:6ω3	26.2	0.122	27.7	0.178
TOTALS:				
Saturates	26.2	0.122	28.0	0.180
Monounsaturates	17.4	0.081	19.2	0.123
Polyunsaturates	46.8	0.217	45.9	0.295
Omega-3's	41.4	0.192	39.2	0.251
Omega-6's	5.4	0.025	6.7	0.043

Skate, Winter
Raja ocellata

	RAW	COOKED
Date of capture	**02/19/87**	**02/19/87**
% Fat	**0.67**	**1.00**
% Moisture	**78.91**	**75.64**
% Ash	**1.12**	**1.13**
mg% Cholesterol	**52.65**	**64.60**

FAME	% FAME	g/100g	% FAME	g/100g
14:0	0.4	0.002	0.5	0.004
15:0	0.2	0.001	0.2	0.001
16:0	21.5	0.096	21.5	0.161
17:0	0.4	0.002	0.4	0.003
18:0	4.4	0.020	4.8	0.036
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	1.1	0.005	1.3	0.010
16:1ω5	0.3	0.001	0.3	0.002
18:1ω9	7.0	0.031	8.6	0.064
18:1ω7	3.1	0.014	3.6	0.027
18:1ω5	0.2	0.001	0.3	0.002
20:1ω11	0.2	0.001	0.2	0.001
20:1ω9	1.9	0.008	2.1	0.016
20:1ω7		0.000		0.000
Sum 20:1's	2.0	0.009	2.3	0.017
22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	2.2	0.010	2.3	0.017
20:2ω6	0.3	0.001	0.4	0.003
18:3ω3	0.4	0.002	0.4	0.003
20:3ω3	0.2	0.001		0.000
20:3ω6		0.000		0.000
18:4ω3	0.2	0.001	0.2	0.001
20:4ω6	3.0	0.013	3.0	0.022
20:5ω3	6.7	0.030	6.3	0.047
22:5ω3	4.0	0.018	3.8	0.028
22:6ω3	35.5	0.159	34.1	0.255
TOTALS:				
Saturates	26.9	0.121	27.3	0.204
Monounsaturates	13.8	0.062	16.4	0.122
Polyunsaturates	52.5	0.235	50.3	0.376
Omega-3's	47.0	0.211	44.7	0.334
Omega-6's	5.5	0.025	5.6	0.042

	RAW	COOKED
Date of capture	**03/26/87**	**03/26/87**
% Fat	**0.68**	**0.80**
% Moisture	**77.78**	**74.04**
% Ash	**0.97**	**1.02**
mg% Cholesterol	**60.30**	**68.27**

FAME	% FAME	g/100g	% FAME	g/100g
14:0	0.4	0.002	0.4	0.002
15:0	0.2	0.001	0.2	0.001
16:0	22.1	0.099	21.6	0.120
17:0	0.3	0.002	0.4	0.002
18:0	3.9	0.017	4.1	0.023
20:0		0.000		0.000
22:0		0.000		0.000
16:1ω7	1.3	0.006	1.2	0.007
16:1ω5	0.3	0.001	0.3	0.002
18:1ω9	8.5	0.039	8.5	0.048
18:1ω7	3.3	0.015	3.4	0.019
18:1ω5	0.3	0.001	0.3	0.001
20:1ω11	0.3	0.001	0.3	0.002
20:1ω9	2.1	0.010	2.3	0.013
20:1ω7	0.1	0.001	0.1	0.001
Sum 20:1's	2.6	0.012	2.8	0.016
22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	1.7	0.008	1.8	0.010
20:2ω6	0.3	0.001	0.3	0.002
18:3ω3	0.3	0.002	0.3	0.002
20:3ω3	0.1	0.000	0.1	0.001
20:3ω6		0.000		0.000
18:4ω3	0.1	0.001	0.1	0.001
20:4ω6	2.9	0.013	3.0	0.017
20:5ω3	6.3	0.028	6.0	0.034
22:5ω3	4.8	0.022	4.7	0.026
22:6ω3	32.4	0.146	33.2	0.185
TOTALS:				
Saturates	26.9	0.121	26.7	0.149
Monounsaturates	16.3	0.073	16.5	0.092
Polyunsaturates	49.1	0.221	49.7	0.277
Omega-3's	44.1	0.199	44.6	0.249
Omega-6's	5.0	0.022	5.1	0.028

Sole, Gray

Glyptocephalus cynoglossus

	RAW	COOKED		RAW	COOKED
Date of capture	**05/29/86**	**05/29/86**	**Date of capture**	**11/06/86**	**11/06/86**
% Fat	**0.72**	**0.93**	**% Fat**	**0.80**	**1.08**
% Moisture	**81.44**	**76.55**	**% Moisture**	**79.62**	**76.61**
% Ash	**1.01**	**0.90**	**% Ash**	**1.40**	**1.26**
mg% Cholesterol	**53.50**	**68.03**	**mg% Cholesterol**	**49.01**	**60.63**

FAME	% FAME	g/100g	% FAME	g/100g	FAME	% FAME	g/100g	% FAME	g/100g
14:0	3.2	0.016	2.5	0.017	14:0	2.9	0.017	2.7	0.023
15:0	1.1	0.005	1.2	0.008	15:0	1.0	0.005	0.8	0.007
16:0	27.0	0.134	37.4	0.255	16:0	18.5	0.107	18.7	0.156
17:0	1.0	0.005	1.1	0.007	17:0	0.6	0.004	0.5	0.005
18:0	7.4	0.036	10.4	0.071	18:0	3.6	0.020	3.8	0.032
20:0		0.000		0.000	20:0		0.000		0.000
22:0		0.000		0.000	22:0		0.000		0.000
16:1ω7	7.2	0.035	4.5	0.030	16:1ω7	4.8	0.028	3.8	0.031
16:1ω5	0.8	0.004	1.0	0.007	16:1ω5	0.7	0.004	0.7	0.006
18:1ω9	10.4	0.052	10.2	0.069	18:1ω9	6.2	0.036	5.5	0.046
18:1ω7	6.4	0.031	6.6	0.045	18:1ω7	4.2	0.024	3.6	0.030
18:1ω5	0.7	0.003	0.7	0.004	18:1ω5	0.4	0.002	0.3	0.003
20:1ω11	2.3	0.012	1.2	0.008	20:1ω11	1.1	0.006	0.8	0.007
20:1ω9	1.5	0.008	1.0	0.007	20:1ω9	1.3	0.007	0.7	0.006
20:1ω7	3.6	0.018	2.4	0.016	20:1ω7	1.7	0.010	1.4	0.012
Sum 20:1's	7.5	0.037	4.6	0.031	Sum 20:1's	4.0	0.023	2.9	0.024
22:1ω13+11		0.000		0.000	22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000	22:1ω9		0.000		0.000
22:1ω7		0.000		0.000	22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000	Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	0.6	0.003	0.5	0.004	18:2ω6	0.7	0.004	0.7	0.006
20:2ω6		0.000	0.3	0.002	20:2ω6		0.000		0.000
18:3ω3		0.000		0.000	18:3ω3		0.000		0.000
20:3ω3		0.000		0.000	20:3ω3		0.000		0.000
20:3ω6		0.000		0.000	20:3ω6		0.000		0.000
18:4ω3	0.8	0.004		0.000	18:4ω3	0.6	0.004	0.7	0.006
20:4ω6	1.9	0.010	1.3	0.009	20:4ω6	3.7	0.021	4.1	0.034
20:5ω3	7.3	0.036	4.0	0.027	20:5ω3	19.1	0.110	21.7	0.181
22:5ω3	1.9	0.010	1.0	0.007	22:5ω3	5.0	0.029	4.8	0.040
22:6ω3	5.4	0.027	2.9	0.020	22:6ω3	16.8	0.097	18.2	0.151
TOTALS:					TOTALS:				
Saturates	39.7	0.197	52.6	0.359	Saturates	26.5	0.153	26.6	0.222
Monounsaturates	32.9	0.163	27.5	0.188	Monounsaturates	20.3	0.117	16.7	0.139
Polyunsaturates	18.0	0.089	10.1	0.069	Polyunsaturates	45.9	0.265	50.2	0.418
Omega-3's	15.5	0.077	7.9	0.054	Omega-3's	41.5	0.239	45.4	0.378
Omega-6's	2.5	0.013	2.1	0.015	Omega-6's	4.4	0.025	4.8	0.040

Sole, Gray (cont.)
Glyptocephalus cynoglossus

	RAW		COOKED	
Date of capture	**03/05/87**		**03/05/87**	
% Fat	**0.81**		**0.82**	
% Moisture	**82.59**		**78.53**	
% Ash	**1.32**		**1.15**	
mg% Cholesterol	**46.58**		**57.17**	
FAME	**% FAME**	**g/100g**	**% FAME**	**g/100g**
14:0	2.9	0.017	1.8	0.011
15:0	1.0	0.006	0.8	0.005
16:0	14.8	0.087	16.4	0.097
17:0	0.7	0.004	0.6	0.003
18:0	3.0	0.018	3.5	0.020
20:0	0.1	0.001		0.000
22:0	0.5	0.003	0.4	0.002
16:1ω7	4.6	0.027	2.7	0.016
16:1ω5	0.8	0.004	0.6	0.004
18:1ω9	6.7	0.039	5.3	0.031
18:1ω7	4.3	0.025	3.1	0.018
18:1ω5	0.8	0.005	0.5	0.003
20:1ω11	1.5	0.009	0.8	0.005
20:1ω9	1.5	0.009	1.2	0.007
20:1ω7	1.5	0.009	0.9	0.005
Sum 20:1's	4.6	0.027	2.9	0.017
22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's		0.000		0.000
18:2ω6	0.8	0.005	0.6	0.004
20:2ω6	0.6	0.004	0.4	0.002
18:3ω3	0.3	0.002	0.1	0.001
20:3ω3		0.000		0.000
20:3ω6		0.000		0.000
18:4ω3	0.4	0.002	0.2	0.001
20:4ω6	4.0	0.024	4.8	0.028
20:5ω3	16.9	0.100	19.3	0.113
22:5ω3	4.6	0.027	5.3	0.031
22:6ω3	14.4	0.085	19.2	0.113
TOTALS:				
Saturates	23.1	0.136	23.4	0.138
Monounsaturates	21.7	0.127	15.2	0.090
Polyunsaturates	42.1	0.248	50.1	0.294
Omega-3's	36.7	0.216	44.2	0.260
Omega-6's	5.4	0.032	5.9	0.034

Tuna, Bluefin
(tail section)
Thunnus thynnus

	RAW	COOKED
Date of capture	08/08/85	08/08/85
% Fat	23.06	24.41
% Moisture	59.50	52.39
% Ash	0.90	1.54
mg% Cholesterol	53.41	42.13

FAME	% FAME	g/100g	% FAME	g/100g
14:0	N.D.	N.D.	5.7	1.318
15:0	N.D.	N.D.	0.4	0.102
16:0	N.D.	N.D.	17.8	4.116
17:0	N.D.	N.D.	0.3	0.064
18:0	N.D.	N.D.	4.4	1.009
20:0	N.D.	N.D.	0.2	0.038
22:0	N.D.	N.D.	0.0	0.000
16:1ω7	N.D.	N.D.	6.0	1.380
16:1ω5	N.D.	N.D.	0.3	0.062
18:1ω9	N.D.	N.D.	15.3	3.542
18:1ω7	N.D.	N.D.	3.0	0.705
18:1ω5	N.D.	N.D.	0.5	0.125
20:1ω11	N.D.	N.D.	0.0	0.000
20:1ω9	N.D.	N.D.	9.9	2.296
20:1ω7	N.D.	N.D.	0.3	0.072
Sum 20:1's	N.D.	N.D.	10.2	2.368
22:1ω13+11	N.D.	N.D.	12.4	2.883
22:1ω9	N.D.	N.D.	0.8	0.184
22:1ω7	N.D.	N.D.	0.4	0.083
Sum 22:1's	N.D.	N.D.	13.6	3.150
18:2ω6	N.D.	N.D.	1.2	0.277
20:2ω6	N.D.	N.D.	0.2	0.051
18:3ω3	N.D.	N.D.	0.8	0.180
20:3ω3	N.D.	N.D.	0.0	0.000
20:3ω6	N.D.	N.D.	0.0	0.000
18:4ω3	N.D.	N.D.	2.0	0.454
20:4ω6	N.D.	N.D.	0.4	0.086
20:5ω3	N.D.	N.D.	5.3	1.230
22:5ω3	N.D.	N.D.	0.9	0.220
22:6ω3	N.D.	N.D.	6.8	1.584
TOTALS:				
Saturates			28.7	6.646
Monounsaturates			48.9	11.333
Polyunsaturates			17.6	4.081
Omega-3's			15.8	3.667
Omega-6's			1.8	0.414

Tuna, Yellowfin
Thunnus albacares

	RAW	COOKED
Date of capture	06/02/86	06/02/86
% Fat	4.19	6.54
% Moisture	69.25	65.05
% Ash	2.45	0.99
mg% Cholesterol	44.73	37.14

FAME	% FAME	g/100g	% FAME	g/100g
14:0	2.2	0.085	2.3	0.142
15:0	0.7	0.025	0.7	0.044
16:0	20.4	0.779	21.1	1.280
17:0	0.8	0.030	0.9	0.053
18:0	7.0	0.266	6.9	0.422
20:0		0.000	0.4	0.022
22:0		0.000		0.000
16:1ω7	4.5	0.172	4.7	0.288
16:1ω5		0.000	0.1	0.006
18:1ω9	21.4	0.819	18.6	1.131
18:1ω7		0.000	2.6	0.157
18:1ω5		0.000	0.1	0.008
20:1ω11		0.000	0.2	0.011
20:1ω9	1.0	0.039	1.1	0.069
20:1ω7		0.000	0.2	0.012
Sum 20:1's	1.0	0.039	1.5	0.092
22:1ω13+11		0.000		0.000
22:1ω9		0.000		0.000
22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	1.0	0.038	1.0	0.060
20:2ω6		0.000	0.2	0.014
18:3ω3	0.5	0.020	0.6	0.034
20:3ω3		0.000	0.2	0.011
20:3ω6		0.000	0.1	0.007
18:4ω3	0.6	0.023	0.6	0.038
20:4ω6	2.0	0.076	1.7	0.104
20:5ω3	5.6	0.215	5.2	0.313
22:5ω3	1.9	0.074	1.6	0.099
22:6ω3	24.7	0.942	20.1	1.223
TOTALS:				
Saturates	31.0	1.185	32.3	1.962
Monounsaturates	27.0	1.030	27.7	1.682
Polyunsaturates	36.3	1.387	31.3	1.902
Omega-3's	33.3	1.274	28.3	1.718
Omega-6's	3.0	0.113	3.0	0.184

Wolffish, Atlantic
Anarhichas lupus

	RAW	COOKED		RAW	COOKED
Date of capture	**06/21/85**	**06/21/85**	**Date of capture**	**03/28/86**	**03/28/86**
% Fat	**5.29**	**3.15**	**% Fat**	**2.14**	**1.46**
% Moisture	**76.13**	**74.91**	**% Moisture**	**79.25**	**76.37**
% Ash	**0.84**	**1.34**	**% Ash**	**1.04**	**1.11**
mg% Cholesterol	**47.27**	**54.83**	**mg% Cholesterol**	**50.48**	**52.42**

FAME	% FAME	g/100g	% FAME	g/100g	FAME	% FAME	g/100g	% FAME	g/100g
14:0	2.4	0.116	N.D.	N.D.	14:0	1.7	0.031	1.2	0.015
15:0	0.5	0.022	N.D.	N.D.	15:0	0.4	0.007	0.3	0.004
16:0	14.0	0.680	N.D.	N.D.	16:0	14.3	0.266	15.7	0.189
17:0	0.3	0.015	N.D.	N.D.	17:0	0.3	0.005	0.3	0.003
18:0	2.3	0.110	N.D.	N.D.	18:0	2.7	0.050	3.5	0.042
20:0	0.1	0.006	N.D.	N.D.	20:0	0.1	0.002		0.000
22:0		0.000	N.D.	N.D.	22:0		0.000		0.000
16:1ω7	10.5	0.511	N.D.	N.D.	16:1ω7	9.0	0.166	6.3	0.076
16:1ω5	0.2	0.012	N.D.	N.D.	16:1ω5	0.3	0.005	0.3	0.003
18:1ω9	23.7	1.153	N.D.	N.D.	18:1ω9	18.0	0.335	14.2	0.170
18:1ω7	5.1	0.246	N.D.	N.D.	18:1ω7	5.9	0.109	5.2	0.062
18:1ω5	0.5	0.024	N.D.	N.D.	18:1ω5	0.5	0.009	0.4	0.005
20:1ω11	1.5	0.073	N.D.	N.D.	20:1ω11	1.2	0.021	0.8	0.010
20:1ω9	1.6	0.079	N.D.	N.D.	20:1ω9	1.8	0.034	1.4	0.016
20:1ω7		0.000	N.D.	N.D.	20:1ω7	1.4	0.026	1.0	0.012
Sum 20:1's	3.1	0.152	N.D.	N.D.	Sum 20:1's	4.4	0.081	3.2	0.039
22:1ω13+11		0.000	N.D.	N.D.	22:1ω13+11		0.000		0.000
22:1ω9		0.000	N.D.	N.D.	22:1ω9		0.000		0.000
22:1ω7		0.000	N.D.	N.D.	22:1ω7		0.000		0.000
Sum 22:1's	0.0	0.000	N.D.	N.D.	Sum 22:1's	0.0	0.000	0.0	0.000
18:2ω6	0.5	0.024	N.D.	N.D.	18:2ω6	0.7	0.014	0.7	0.008
20:2ω6	0.6	0.029	N.D.	N.D.	20:2ω6	0.5	0.010		0.000
18:3ω3	0.3	0.014	N.D.	N.D.	18:3ω3	0.2	0.004	0.2	0.002
20:3ω3		0.000	N.D.	N.D.	20:3ω3		0.000		0.000
20:3ω6		0.000	N.D.	N.D.	20:3ω6		0.000		0.000
18:4ω3	1.1	0.052	N.D.	N.D.	18:4ω3	0.5	0.009	0.3	0.004
20:4ω6	2.3	0.113	N.D.	N.D.	20:4ω6	2.7	0.050	3.8	0.045
20:5ω3	10.2	0.497	N.D.	N.D.	20:5ω3	12.9	0.240	17.7	0.213
22:5ω3	1.2	0.058	N.D.	N.D.	22:5ω3	1.8	0.034	1.8	0.021
22:6ω3	8.7	0.423	N.D.	N.D.	22:6ω3	13.5	0.251	17.1	0.206
TOTALS:					TOTALS:				
Saturates	19.5	0.949			Saturates	19.5	0.361	21.0	0.253
Monounsaturates	43.1	2.098			Monounsaturates	38.0	0.705	29.5	0.356
Polyunsaturates	24.8	1.210			Polyunsaturates	33.0	0.612	41.5	0.500
Omega-3's	21.4	1.044			Omega-3's	29.0	0.538	37.1	0.447
Omega-6's	3.4	0.165			Omega-6's	4.0	0.074	4.4	0.053

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